

New
PRODUCTS
APPLICATIONS
PROCESSES

CHEMICAL EQUIPMENT PREVIEW

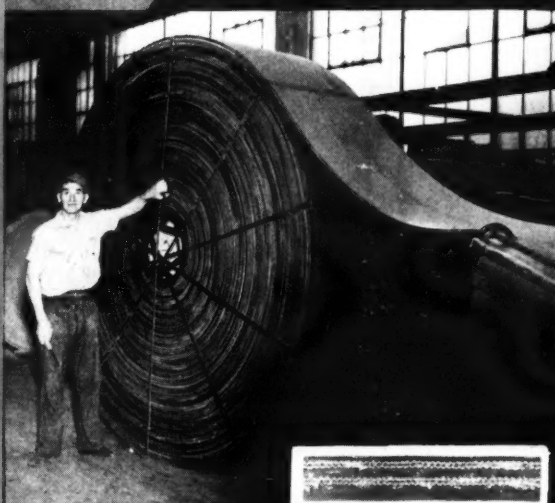
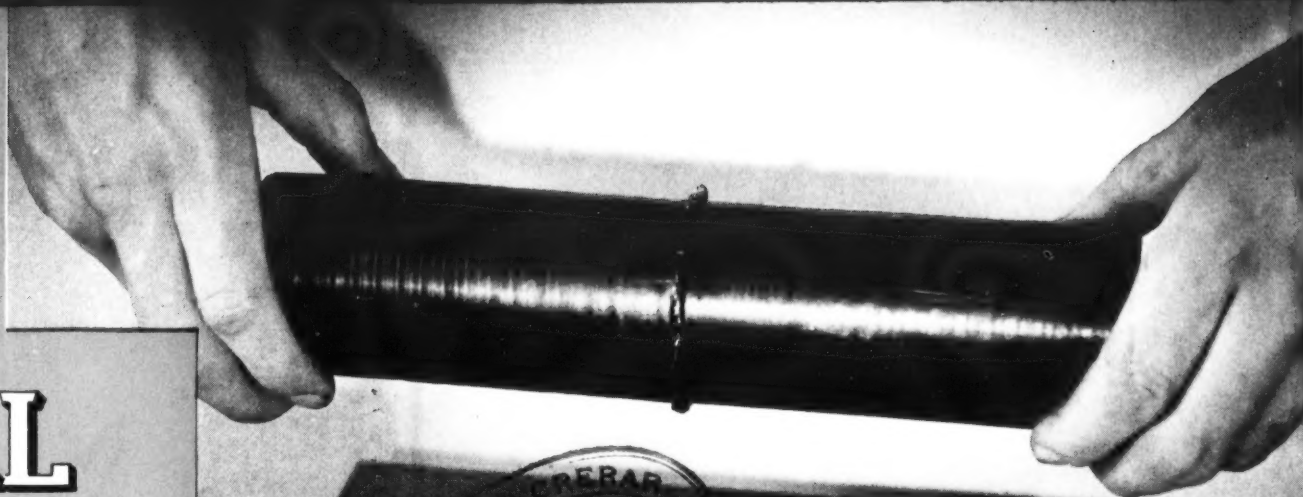
The Chemical Edition of
EQUIPMENT PREVIEW



Over 29,000 Copies

JANUARY
(January-February)
1943

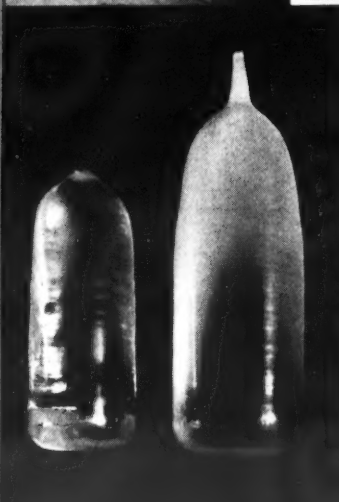
Latest Developments in Equipment
Materials and Products for Engineers
Chemists and Executives in
Chemical Process Manufacturing



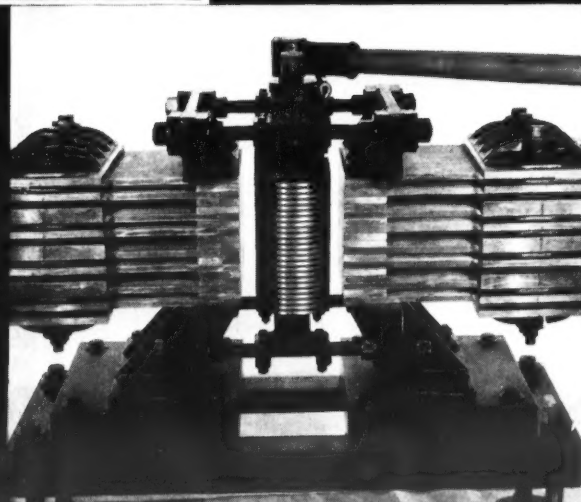
Plastic pipe welded in 45
sec.: easily threaded or bent;
chemically resistant

Steel cable carcass in 1100 ft.
conveyor belt permits maxi-
mum troughing without
injury

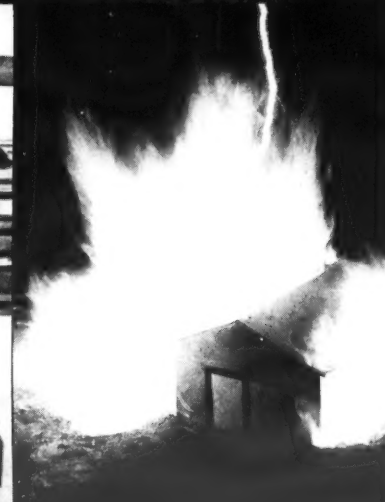
Lightning deflector protects
model explosive plant in
laboratory test



Synthetic sapphires of 250
and 350 carats



Portable 30,000 amp. switch disconnects cells in
electrolytic process



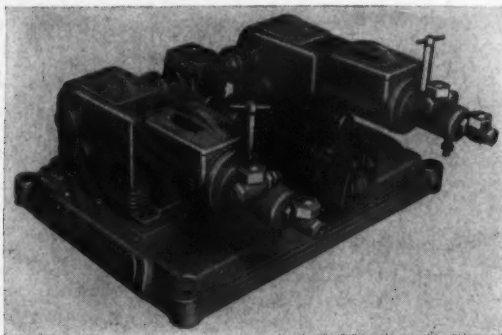
Unprotected model containing

% PROPORTIONEERS % SPECIALIZED ENGINEERING ON PROPORTIONING PROBLEMS

FOR INSTANCE . . .

CASE HISTORY NO 7. In pilot plant development for a new type of synthetic rubber, the proportional, constant rate blending of a number of fluid ingredients was required. **%PROPORTIONEERS%** Midget Adjust-O-Feeder solved the problem because of its extreme flexibility — due to the following features:

1. Straight through drive shaft design permits mounting of up to 8 units on either side of central motor (see illustration).
2. Fully enclosed frame presents pleasing appearance, protects moving parts, and eliminates necessity of guards.
3. Available with either diaphragm or plunger type displacement heads. Diaphragm units (0 to 7½ g.p.h.; 0 to 100 lbs.) are available with neoprene pre-formed reinforced diaphragms — no stuffing gland — plastic diaphragm heads — built-in suction and discharge valves with sight feed domes. Plunger units (0 to 10 g.p.h.) with Bakelite or plastic heads (0 to 200 lbs.), with stainless or iron heads (0 to 1000 lbs.) are equipped with **%PROPORTIONEERS%** fluid sealed stuffing gland for hard-to-handle and corrosive fluids; and built-in ball type checks.



Duplex Midget Adjust-O-Feeder Proportioning Pump of Plunger Type. Available with from 1 to 8 units driven from a single central motor. See Feature No. 1, above.

4. Micrometer stroke adjustment through neutralizing eccentrics.

Complete engineering details forwarded upon receipt of full information about your problem. Address —

% PROPORTIONEERS, INC. % 19 CODDING STREET, PROVIDENCE, R. I.

The Cover Pictures

Not a "lead pipe cinch," as the pipes pictured on the cover are plastic. It's a mighty simple matter to hot plate weld them in just one minute to a perfect joint that develops greater strength than the pipe itself within 24 hours. Practical replacement for metal and rubber.

Transfers are not necessary on this ride. That 1100 foot conveyor belt makes a through trip as it lifts ore in one of the biggest mines, a height of 240 feet, saving time and labor. The great load capacity and operating length combined with remarkable flexibility are achieved by the use of a carcass of heavy steel cables.

Laboratory technicians make lightning strike as often and wherever they wish, in proving the effectiveness of recently developed arrestors that cost very little and use practically no vital materials. Actual conditions and hazards are reproduced by means of model buildings, gasoline and man-made lightning.

Next to diamonds in hardness, these synthetic sapphires have to be to perform the service required. Fortunately, they are now available from adequate domestic sources. They are meeting the ever great demand for jewel bearings and their suitability for cutting tool tips, flow meter orifices and other industrial applications is definitely indicated.

Some modern processing operations require switches that are just about as tough as a "Commando" and as quick to react. Contacts on the 30,000 ampere switch advance automatically and seat on new points to assure clean and perfect contact surfaces. It is designed for continuous use without undue rise in temperature, easy manual operation and portability.

That's Interesting

"The Greenhouse," is the apt name that RAF flyers have for the plastic cover for the cockpit. Others are confetti — (machine gun ammunition), mouse traps (submarines) and Winnie the Pooh (airraid siren).

★
Shirt tails cut two inches shorter for the duration will save enough material to make 10,000,000 shirts. This action seems to go right along with cuffless trousers although it is reported recently that certain tailor made suits can now be secured with two trousers.

★
Glass blocks are being used in many interesting and practical ways in tables and occasional furniture. Hollow glass blocks that fit securely in furniture but can also be moved and changed in position serve as flower pots, aquariums and book ends.

★
Riveting is a most important job in our war effort. Just as an example a Lockheed-Hudson Bomber is said to require over 163,000 rivets.

★
To keep the Japs from getting metal in any form the Chinese have withdrawn copper and silver coins from circulation, replacing them with notes printed on American made 100% rag paper, reports the Acme Process News.

★
"Wanted — Electricians who can walk stilts." That was the recent requirement of a northwestern construction company. The stilts would enable the electricians to work at required height without using ladders, thus saving time on a rush Army job.

(Continued on page 83)

Check below, For More Product Information

EVERY PRODUCT DESCRIBED IN THIS ISSUE IS LISTED BELOW . . . Check the items that interest you, as many as interest you. Mail to publisher . . . information comes to you direct, without obligation.

✓ Key	Product	✓ Key	Product	✓ Key	Product	✓ Key	Product
5986	Proportioning Pump	5945	Emulsifier in Synthetic	6001	Electronic Level Controls	6062	Packaging Scales
5987	Mixers	5946	Rubber Polymerization	6002	Salt Bath Control	6063	Roller Chain
5988	Mastic Conductive Flooring	5947	Returning Containers	6003	Operation-Time Recorders	6064	Blowers
5989	Laminated Solenoids	5948	Cement Cleaner	6004	Two-Pen Flow Recorder	6065	Industrial Trucks
5990	Mixing Equipment	5949	Asphalt Heavy Duty Floor	6005	Abrazer	6066	Centrifugal Compressors
5991	Grinding Wheel Compound	5950	Protective Skin Cream	6006	CO ₂ Analyzer	6067	Portable Tool Wheels
5992	Wood Lockers	5951	Dehydrated Paint	6007	Pyrometer	6068	Atomic-Hydrogen Electrode
5993	Steam Traps	5952	Degreasing Solvents	6008	Starters	Holder	
5994	Care of Centrifugal Pumps	5953	Chemical Porcelain	6009	Remote Bulb Thermostat	6069	Circuit Breaker, Fusible
5995	Conveyors	5954	Pipe Joint Compound	6010	Tank Gauges	Switchboards	
5996	Hydrogen Purity Recorder	5955	Comarone-Indene Resins	6011	All-Metal Thermometer	6070	Standard Steels Data Card
5997	Pyrex Glass Piping	5956	Floor Resurfacer	6012	Thermometers	6071	Rotary Pumps
5998	Lift Trucks	5957	Petroleum Type Textile	6013	Heavy-Duty Manometer	6072	Clear Liquid Service Pumps
5999	Auto-Louvre Dryer	Finish		6014	Marking Stick for	6073	Belt Surfacing
6000	Humidifying System	5957	Corrosion Resistant		Temperature Observation	6074	Centrifugals
6001	Conveyor Chain Lubricant	Synthetic		6015	Ground Resistance Meter	6075	Corrosion Resistant Valves
6002	Heat Transfer Tubing	5958	Kerosene Handbook	6016	Dewatering Press	6076	Steam Hoses
6003	Pumps	5959	Plastic Insulation	6017	Processing Equipment	6077	Degreasing Equipment
6004	Mixers	5960	Plastic Cork Coating	6018	Program Switch	6078	Dust Collectors
6005	Spray Roof Cooling System	5961	Insulation	6019	AC Welding Electrodes	6079	Instant Water Heater
6006	Filters	5962	Steel Carcass Conveyor Belt	6020	Moisture Tester	6080	Decarbonizing System
6007	Industrial Trucks	5963	Thermoplastic Pipes	6021	Liquid Level Control	6081	Colloidal Natural Graphite
6008	Floor Resurfacer	5964	Plastic Face & Eye Shield	6022	Laboratory Furniture	6082	Pump Data Sheets
6009	Pumps	5965	2-lb. Pneumatic Hand Drill	6023	Counting Machines	6083	Heat Treating Baskets
6010	Chemical Porcelain	5966	Reaction Kettles	6024	Portable Emergency Spotlight	6084	Stainless-Clad Steel
6011	Pumps	5967	Sweeping Compound	6025	Abrasive Cut-Off Blade	6085	High Vacuum Pumps
6012	Heavy Ampere Switches	5968	Plastic Case Respirator	6026	Valves	6086a	Air Heaters
6013	Temperature Controls	5969	High Temperature Fans	6027	Starters	6086b	Ovens & Dryers
6014	Scrapers for Steam Kettles	5970	Gate Valves	6028	Acid-Handling Pumps	6087	Steam Jet Elevators
6015	Colloidal Graphite	5971	Mill Feed Control	6029	Chemical Water-De-Ionizing	6088	Hydrogenated Resin
6016	Ceramic Glazes Book	5972	Carton Stitcher	6030	Process for Lead Coating	6089	Metallizing Equipment
6017	Steam Traps	5973	Rotary Pumps	6031	Humidifiers	6090	Bearing Lubrication
6018	Flexible Coupling	5974	Fluorescent Fixtures	6032	Rotary Pump Maintenance	6091	Motor Selection Bulletin
6019	Ball-Bearing Swing Joints	5975	Non-Moistening Labels	6033	Plastic Tubing & Fittings	6092	Communicating Systems
6020	Bag Filling Machinery	5976	Solenoid Valves	6034	Grinding Mill Feeders	6093a	Pony Mixers
6021	High Vacuum Gauges	5977	Electronic Water Detector	6035	Chemical Porcelain	6093b	Gyrating Screens
6022	Casting Pattern Repair	Lock		6036	Roller Gravity Conveyors	6094	Material Handling
6023	Fabric	5978	Sub-Zero Test Cabinets	6037	Deaerator Catalog	6095	Steam Traps
6024	Steam Jet Ejectors	5979	Thermocouple Materials	6038	Rubber Guide Book	6096	Steam Sample Degasser
6025	Kettle	5980	Continuous-Flow Colorimeter	6039	Heat Treating Salts	6097	Industrial Rubber Care
6026	Pressure Dissolving Equipmt.	5981	Pyrometers	6040	Floor Scales	6098	Graphite Handbook
6027	Lathe Catalog	5982	Weathering Unit	6041	Centrifugal Pumps	6099	Lathe Cleaning
6028	Processing Equipment	5983	Petroleum Test Apparatus	6042	Electric Motor Care	6100	Cape-Plugs for Pipes, Tubes
6029	Electric Motors	5984	Control Instrument Booklet	6043	Industrial Trucks	6101	Pipe Tools
6030	Synthetic Shellac	5985	pH Control	6044	Gyrating Screens	6102	Ball & Pebble Mills
6031	Chemical Proportioners	5986	Viscosity Bath	6045	Laboratory Glassware	6103	Traffic Control Lights
6032	Automatic Starters	5987	Automatic Valves	6046	Auger Packer	6104	Aridifiers
6033	Pressure Reducing Valve	5988	Multi-Contact Timers	6047	Nat'l. Paint Dictionary	6105	Protective Aprons-Sleeves
6034	Condensate Return System	5989	Thermometers	6048	Handling Equipment	6106	Self-Adjusting Jig Clamps
6035	Shape Book	5990	Indicating Thermometers	6049	Electric Air Cleaner	6107	Filter Presses
6036	Concrete Form Lining	5991	Vacuum Gauges	6050	Viscous Liquid Pumps	6108	Lathe
6037	Acid-proof Chemical Pipe	5992	Sub-Zero Temperature	6051	Sheet & Plate Steel	6109	Lighting Equipment
6038	Acid-proof Tank Linings	Control		6052	Filters	6110	Conveyor Chains
6039	Floor Resurfacer	5993	Photocell Scale Control	6053	Blast Furnace Book	6111	Wood Toilet Compartments
6040	Structural Resin Plastic	5994	Parts Cleaning Machine	6054	Boiler Valves	6112	Stiffers
6041	Powdered Drawing	5995	Fastenings	6055	Portable Grinders	6113	Moisture Control System
6042	Lubricant	5996	Recalibrator Gauge	6056	Fluorescent Unit Priorities	6114a	Kettles
6043	Anhydrous Sodium	5997	Electronic Tube Chart	6057	Alloy Casting Service	6114b	Mixers
6044	Metasilicate	5998	Liquid Level Gauges	6058	Adjustable Speed Drives	6115	Horizontal Plate Filters
6045	Transparent Plastic	5999	Laboratory Equipment	6059	Priority Handbook	6116	Domestic Synthetic Sapphire
6046	Cement for Porcelain, Glass	6000	Thermometers	6060	4-Lamp Fluorescent Ballast	6117	Blackout Type Ventilators
6047	Cellulose Solutions			6061	V-belt Drive Conservation		

If you wish

MORE PRODUCT INFORMATION

Check products which interest you, mail to us.

If You Wish More Information On Products--

January-February,

See Reverse Side of this Sheet --- Be Sure To Give Your Address

(Listing of products continued)

✓ Key	Product	✓ Key	Product	✓ Key	Product	✓ Key	Product
<input type="checkbox"/>	6118 Centralized Lubrication	<input type="checkbox"/>	6154 Fluorescent Fixture Hangers	<input type="checkbox"/>	6190 W. Swin	<input type="checkbox"/>	6228 Dust-Proof Roller
<input type="checkbox"/>	6119 Feedlot Filter Plans	<input type="checkbox"/>	6155 Industrial Carburetor	<input type="checkbox"/>	6191 Casters	<input type="checkbox"/>	6229 Relanding Buckets
<input type="checkbox"/>	6120 Heating Cables	<input type="checkbox"/>	6156 Rolls	<input type="checkbox"/>	6192 Lighting Equipment	<input type="checkbox"/>	6230 Non-Toxic Degreaser
<input type="checkbox"/>	6121 Hammer Crusher	<input type="checkbox"/>	6157 Plunger Pumps	<input type="checkbox"/>	6193 Women Worker's Hairguard	<input type="checkbox"/>	6231 Clearer
<input type="checkbox"/>	6122 Processing Equipment	<input type="checkbox"/>	6158 Vibrating Screens	<input type="checkbox"/>	6194 Pulverizers	<input type="checkbox"/>	6232 Synthetic Latex Pump
<input type="checkbox"/>	6123 Humidifiers	<input type="checkbox"/>	6159 Wood Rolling Door	<input type="checkbox"/>	6195 Pumps and Fittings	<input type="checkbox"/>	6233 Sight Feed Bubbler
<input type="checkbox"/>	6124 Synthetic Pipe	<input type="checkbox"/>	6160 Humidifiers	<input type="checkbox"/>	6196 Toilet Compartments	<input type="checkbox"/>	6234 Dust Collectors
<input type="checkbox"/>	6125 All-Purpose Steam Generator	<input type="checkbox"/>	6161 Portable Conveyors	<input type="checkbox"/>	6197 Remote Hydraulic Control	<input type="checkbox"/>	6235 Hydraulic Closing Device
<input type="checkbox"/>	6126 Chemical Feeders	<input type="checkbox"/>	6162 Mixers	<input type="checkbox"/>	6198 Blast Curtains	<input type="checkbox"/>	6236 Filter Press
<input type="checkbox"/>	6127 Gears	<input type="checkbox"/>	6163 Explosion-Proof Air Motors	<input type="checkbox"/>	6199 Electric Heat Units	<input type="checkbox"/>	6237 Electric Sifters
<input type="checkbox"/>	6128 Flexible Couplings	<input type="checkbox"/>	6164 Spray Nozzles	<input type="checkbox"/>	6200 Screw Conveyors	<input type="checkbox"/>	6238 Cement Floor Cleaner
<input type="checkbox"/>	6129 Material Handling Equipment	<input type="checkbox"/>	6165a Face Shields	<input type="checkbox"/>	6201 Motorized Sweeper	<input type="checkbox"/>	6239 Lighting Reflectors
<input type="checkbox"/>	6130 Master Station	<input type="checkbox"/>	6165b Respirators	<input type="checkbox"/>	6202 Ball Bearing Swing Joints	<input type="checkbox"/>	6240 High Vacuum Gauges
<input type="checkbox"/>	6131 Communicating System	<input type="checkbox"/>	6166 Speed Reducers	<input type="checkbox"/>	6203 Respirators	<input type="checkbox"/>	6241 Tumbling Barrel Mixers
<input type="checkbox"/>	6132 Compound Heater	<input type="checkbox"/>	6167 Blackout Blinds	<input type="checkbox"/>	6204 DeWitt Operated Holes	<input type="checkbox"/>	6242 High Bay Fluorescent Un
<input type="checkbox"/>	6133 Pneumatic Conveyors	<input type="checkbox"/>	6168 Rotary Kilo	<input type="checkbox"/>	6205 Processing Equipment	<input type="checkbox"/>	6243 Portable Ventilator-Exhauster
<input type="checkbox"/>	6134 Metallic Pump Packing	<input type="checkbox"/>	6169 Protective Clothing for Women Welders	<input type="checkbox"/>	6206 Air Motors	<input type="checkbox"/>	6244 Motor Selector Slide Rule
<input type="checkbox"/>	6135 Bin Level Controls	<input type="checkbox"/>	6170 Rubberized Work Gloves	<input type="checkbox"/>	6207 Rubber Lung	<input type="checkbox"/>	6245 Heavy Duty Air Translators
<input type="checkbox"/>	6136 Luminous Signs	<input type="checkbox"/>	6171 Vibrating Equipment	<input type="checkbox"/>	6208 Infra-Red Drying of Polishing Wheels	<input type="checkbox"/>	6246 Chemical Dryers
<input type="checkbox"/>	6137 First Aid Instruction Film	<input type="checkbox"/>	6172 Dust Collectors	<input type="checkbox"/>	6209 Stainless-Clad Steel	<input type="checkbox"/>	6247 Multicore
<input type="checkbox"/>	6138 Colloid Mills	<input type="checkbox"/>	6173 Coating for Rubber Products	<input type="checkbox"/>	6210 Hoses	<input type="checkbox"/>	6248 Midget Metal Box Relay
<input type="checkbox"/>	6139 Paper Bags	<input type="checkbox"/>	6174 Acid Proof Tank Linings	<input type="checkbox"/>	6211 Cast Iron Grid Heater	<input type="checkbox"/>	6249 Alloy Steel Data Sheet
<input type="checkbox"/>	6140 Processing Equipment	<input type="checkbox"/>	6175 Pumps	<input type="checkbox"/>	6212 Fluorescent Lamp Ballast	<input type="checkbox"/>	6250 Salt Bath Furnace
<input type="checkbox"/>	6141 Wiping Cloths	<input type="checkbox"/>	6176 Neoprene Gloves	<input type="checkbox"/>	6213 Fittings	<input type="checkbox"/>	6251 Overhead Handling System
<input type="checkbox"/>	6142 Liquid Screens	<input type="checkbox"/>	6177 Rotary Pressure Joints	<input type="checkbox"/>	6214 Mixers	<input type="checkbox"/>	6252 Power Transmission
<input type="checkbox"/>	6143 Laboratory Furnace	<input type="checkbox"/>	6178 Air-Motored Agitators	<input type="checkbox"/>	6215 Bag Closing Machinery	<input type="checkbox"/>	6253 Swinging Door Grill
<input type="checkbox"/>	6144 Rheostats	<input type="checkbox"/>	6179 Hotel Fountain Squares	<input type="checkbox"/>	6216 Centralized Lubrication	<input type="checkbox"/>	6254 Pay-Roll Calculator
<input type="checkbox"/>	6145 Steam Jacketed Pumps	<input type="checkbox"/>	6180 Motor Selector Slide Rule	<input type="checkbox"/>	6217 Glass Block Partitions	<input type="checkbox"/>	6255 Slurry Pumps
<input type="checkbox"/>	6146 Safety Belt	<input type="checkbox"/>	6181 Scales	<input type="checkbox"/>	6218 Spray Booths	<input type="checkbox"/>	6256 Centrifugal Air Separators
<input type="checkbox"/>	6147 Connectors	<input type="checkbox"/>	6182 Gummed Labels for Metal	<input type="checkbox"/>	6219 Synthetic Rubber Lining	<input type="checkbox"/>	6257 Magnetic Separators
<input type="checkbox"/>	6148 Filter Press	<input type="checkbox"/>	6183 Spray Nozzles	<input type="checkbox"/>	6220 Dust Collector	<input type="checkbox"/>	6258 Floor Resurfacer
<input type="checkbox"/>	6149 Steel Grating	<input type="checkbox"/>	6184 Valves	<input type="checkbox"/>	6221 Pumps	<input type="checkbox"/>	6259 Temperature & Humidity Control Cabinets
<input type="checkbox"/>	6150 Small Parts Cleaning Unit	<input type="checkbox"/>	6185 Processing Equipment	<input type="checkbox"/>	6222 Portable Brush Plating Unit	<input type="checkbox"/>	6260 Lift Trucks
<input type="checkbox"/>	6151 Wet Type Dust Disposal Unit	<input type="checkbox"/>	6186 Light Weight Respirator	<input type="checkbox"/>	6223 Acid-Resisting Fans	<input type="checkbox"/>	6261 Chemical Stoneware
<input type="checkbox"/>	6152 Pumps	<input type="checkbox"/>	6187 Portable Belt Conveyor	<input type="checkbox"/>	6224 Hydraulic Press	<input type="checkbox"/>	6262 Cover Chemical Porcelain
<input type="checkbox"/>	6153 Filters	<input type="checkbox"/>	6188 Continuous Use Filter	<input type="checkbox"/>	6225 Tube Cleaners		
<input type="checkbox"/>	6154 Turbine Sifter	<input type="checkbox"/>	6189 Vertical Fuel Pump	<input type="checkbox"/>	6226 Alcohol Fire Extinguisher		
		<input type="checkbox"/>	6190 Pipe Joint Compound	<input type="checkbox"/>	6227 Pipe Tools		

Please send information requested to:

Name Title
 Firm (Please give the firm name)
 Street Address
 City and State

Mail to CHEMICAL EQUIPMENT PREVIEW, 737 N. Michigan Ave., Chicago

DIRECTORY

of products in this issue

You will find listed below names of products and new literature items described in this issue, with page reference on each.

Product	A	Page
Abraser		31
Agitator, Air-Motored		64
Air Cleaner, Electric		38
Alloy Casting Service		40
Alloys, Steel		79
Aridifier		47

Product	B	Page
Bag Closer		73
Bags, Paper		54
Ballast, Fluorescent Lamp		40, 72
Baskets, Heat Treating		44
Belt, Safety		56
Belt, Conveyor		22
Blade, Abrasive Cut-Off		35
Blinds, Blackout		61
Blowers		41
Boiler, Dust Proof		76
Booth, Spray		73
Bubbler, Sight Feed		76
Buckets, Rehandling		76

Product	C	Page
Cabinet, Sub-zero Temperature		26, 29
Cabinets, Temperature & Humidity Control		82
Cable, Heating		30
Calculator, Cutting Tool		78
Calculator, Pay-roll		80
Capacitors		56
Caps, Pipe & Tube		46
Carburetor, Industrial		58
Casters		68
Cellulose, Solutions		19
Cement, Porcelain		43
Centrifugals		42 & 43
Chain, Conveyor		48
Chains, Roller		40
Clamps, Self-Adjusting Jig		47
Cleaner, Cement		20, 77
Cleaners, Tube		75
Cleaning Machine, Parts		29, 57
Clothing, Protective		47
Clothing, Women's Welding		61
Clocks, Wiping		54
CO, Analyzer		31
Coatings, Plastic Cork		22
Coating for Rubber Products		63
Colorimeter, Continuous-flow		27
Communicating System		45, 52
Compressor, Centrifugal		41
Condensate Return System		17
Containers, Returning		19
Control, Humidity		48
Control, Level		30, 31, 34, 53
Control, Mill Feed		25
Control, Photocell Scale		29
Control, Remote Hydraulic		69
Control, Salt Bath		31
Controls, Precision		27
Controls, Temperature		12
Conveyors		6, 36, 52, 60, 66, 70
Counting Machines		35
Couplings, Flexible		13, 52
Crum, Protective Skin		20
Crusher, Hammer		50
Curtains, Wire Blast		69

Product	D	Page
Densitometer Catalog		37
Degassifier, Steam Sample		46
Degassifiers		43, 44, 76
Degassing Solvents		20
Dictionary, Paint		38
Door, Wood Rolling		59
Drill, Pneumatic Hand		23
Drives, Adjustable Speed		40
Dryer, Louvre-Roto		79
Dryers, Chemical		79
Dust Collectors		44, 57, 62, 74, 76, 79

Product	E	Page
Exactor, Steam Jet		14, 45
Electrode, AC Welding		34
Electrode Holder, Atomic-hydrogen		41
Emulsifier, Synthetic Rubber		19
Emulsifier, Fire Alcohol		75

Product	F	Page
Fans, Acid Resisting		74
Fans, High Temperature		24
Fastenings		29
Feeders, Chemical		51
Feeders, Grinding Mill		36
Filters, Bag		14
Filter Plate, Freeflow		50

(Continued on page 82)

For more information on product at right, specify CEP 5887
... see information request blank between pages 2-3.

NEW APPLICATIONS AND DEVELOPMENTS OF "LIGHTNIN" AGITATORS PLAY AN IMPORTANT PART IN THESE WAR INDUSTRIES

Heat Treating (Shells and Armor Plate)
Synthetic Rubber
Aviation Gasoline

Gas Absorption and Dispersion
Defining
Magnesium

Alcohol Conversion
Chemical Plant Expansion
Explosives

Moulding Plastic Impregnated Plywood Parts

AIR DRIVEN MIXERS



"LIGHTNIN" line of Air Driven Portable Mixers now include Direct and Gear Drive as well as Laboratory models and Heavy Duty Mixers. These mixers are built to operate with air pressures from 60 to 120 lbs. and speed variation is obtained by throttling the air motor. Air driven mixers have a decided safety advantage in mixing paints, chemicals, high explosives and alcoholic compounds. Even when used in heavy liquids air motors will not stall. Models up to 1 H.P. are available.

TURBINE TYPE VERTICAL MIXERS



A new line of heavy-duty, slow speed Turbine Type Vertical Mixers permit the use of a longer shaft. Available in all speeds below 200 R.P.M. Installation is extremely simple. Ready to install on standard I.P.S. nozzles or special drilling. Furnished with many special types of impellers, laboratory and field-proven for superiority in liquid displacement, gas absorption and heat exchange and general agitation.

V-BELT DRIVE



V-Belt drive for top-entering propeller-type mixers for use over open tanks, closed tanks, pressure or vacuum vessels, or for attachment to standard size nozzles. Speed of a unit can be changed by changing the sheave and pulleys or a variable speed pulley can be provided on the motor. Drive can be furnished with electrically conducting belts to do away with danger from static, or with oil resisting belts, where necessary. The motor for the drive can be standard, semi-enclosed, drip-proof, or totally enclosed, air jacketed or explosion proof. Available in sizes from 1 to 25 H.P.

SPECIAL DRIVES



"LIGHTNIN'S" Right Angle Drive is designed to save critical materials, cut down man-hours factoring man-hours and speed up deliveries. It permits the mounting of motors at sufficient distances from the agitator when close proximity would create a hazard. Head room requirements are reduced to a minimum. Complete range of sizes from 1 to 50 H.P. are available. Information on other special drives available on request.

MIXER DRIVE WITH FAN



"LIGHTNIN'S" New Mixer Drive with fan is especially designed for mixing hot gases or circulating air or gases over coils for increasing rate of heat exchange or for use in maintaining uniform temperature. This new Mixer Drive further increases the range of application of "LIGHTNIN'S" Equipment.

CHAIN DRIVE SIDE-ENTERING MIXERS



Here is another new "LIGHTNIN" Mixer design—the chain drive applied to side entering mixers. Construction permits use out-of-doors. Part of the guard has been removed in this illustration to show the chain drive which eliminates static hazards present in V belt drives. Complete range of sizes from 1 to 25 H.P. are available.

"LIGHTNIN" Mixers are constantly being improved and redesigned to meet your specific requirements under present war production conditions. They proved in actual service that they cut power consumption, conserve vital materials, increase product uniformity and speed up production.

Each product here illustrated is a new development. You can rest assured that 1943 will reveal the same consistent effort to help you solve your mixing problems.

MIXING EQUIPMENT COMPANY, INC.
1085 Carson Ave., Rochester, N. Y.

Please send me:

- Catalog B-68—Top Entering Mixers
- Catalog B-69—Air Driven Mixers
- Catalog B-65—Portable (Clamp-on) Mixers
- Catalog B-66—Side Entering Mixers
- Catalog B-67—Laboratory Mixers
- Mi-11—MIXING OPERATIONS DATA SHEET: The basis for a time-saving recommendation
- Complete Catalog Binder for Executives and Engineers in Authority

Name.....
Company.....
Address.....

PRODUCTION

Conductive Floor Material Can Be Easily Applied

Ready-mixed mastic material for heavy duty service, shows resistance as low as 700 ohms

Uses — For imparting the necessary properties to industrial floors to provide conductive qualities to dissipate static electricity charges built up by friction. It may also be used on table tops and work bench surfaces.

Features — Easily applied. Sets quickly. Designed to withstand heavy loads regardless of wheel size. Can be swept, brushed, mopped or scrubbed.

Performance — Resistance as low as 700 ohms to a flow of current, applied to floor through a five pound electrode in contact with five square inches of floor. This is an official test in which specifications permit up to 250,000 ohms resistance. Tests referred to here were conducted under normal operating and floor conditions. Tested with steel wire brushes, emery wheels and hammer blows.

Description — Application requires no special labor. Dark red color. In ready-mixed mastic form. Complete information on request.

ROCK-TRED CORP., Dept. CEP,
605 West Washington St., Chicago,
Ill.

When inquiring specify CEP5888
— see information request blank, pgs. 2-3

Laminated Solenoids In Pull & Push-Pull Type

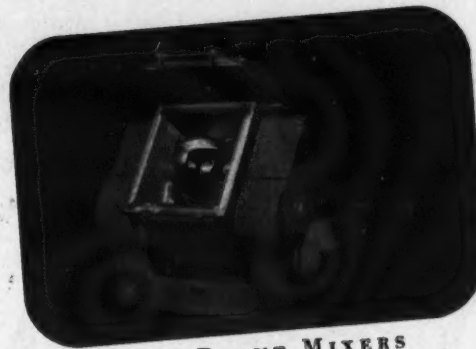
Two-page illustrated bulletin describes features of laminated solenoids emphasizing pressure-riveted laminated steel frame, mounting front and side plate in one piece, phosphor bronze plunger guides, cadmium plating. Photos and detailed drawings of both push and push-pull types are shown. These together with current and pull curve clearly charted augment data on important factors and procedure in selecting solenoids. Bulletin — "Laminated Solenoids," available on request.

DEAN W. DAVIS & CO., Dept. CEP,
549 West Fulton St., Chicago, Ill.

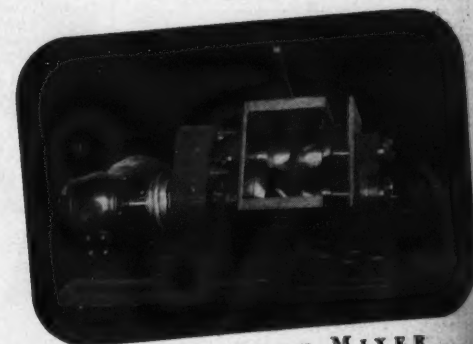
When inquiring specify CEP5889
— see information request blank, pgs. 2-3

For more information on product at right, specify CEP 5890
... see information request blank between pages 2-3.

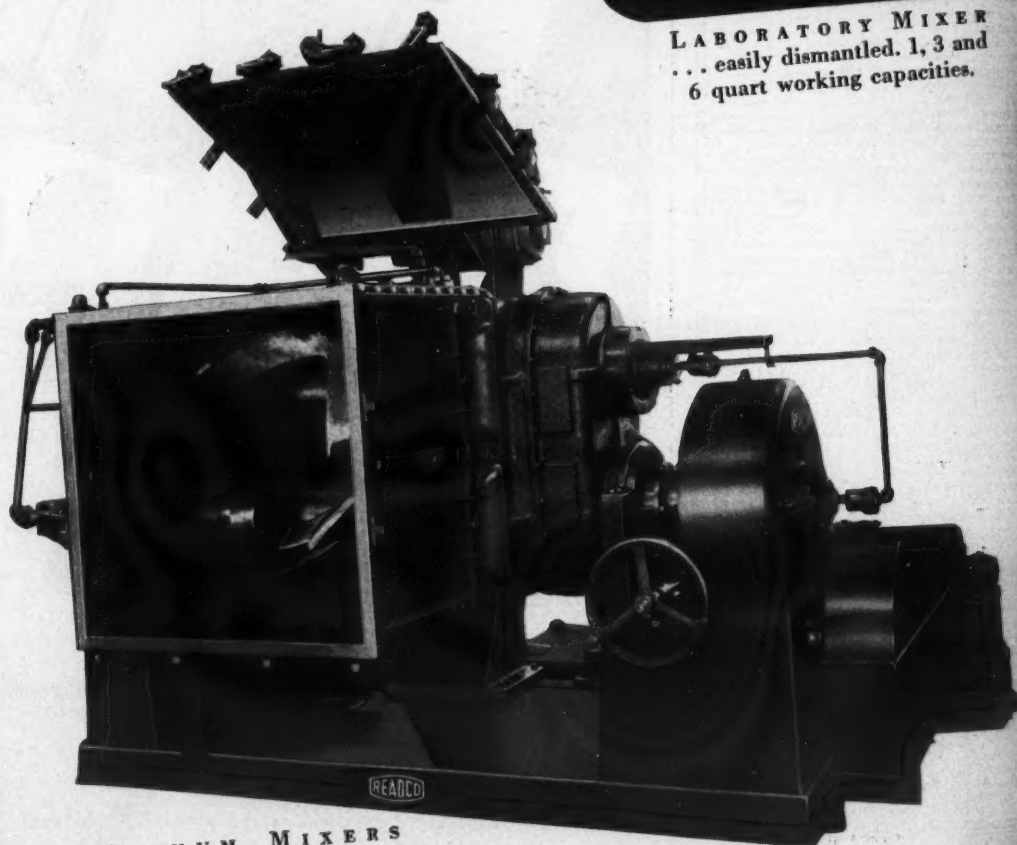
Mixers and Material



PILOT PLANT MIXERS
2½, 5 and 10 gallon working capacities.



LABORATORY MIXER
... easily dismantled. 1, 3 and 6 quart working capacities.



VACUUM MIXERS
10 gallon to 400 gallon working capacities.

Handling Equipment

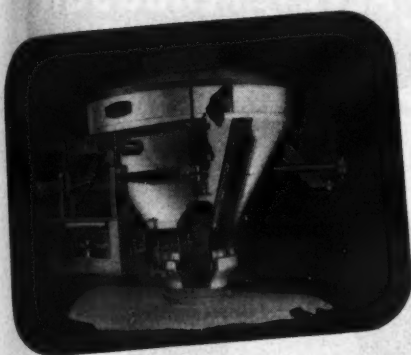
to Speed Your War Effort



Pick your chemical mixing or material handling job and Read will design the equipment to do it better—with less waste and contamination. The mixers and equipment illustrated are a few of the many serving our nation's war plants—day in and day out—for the greatest production with the least attention.

Read has built them with exactness—with attention to stability and designed to fill the needs of the material to be processed.

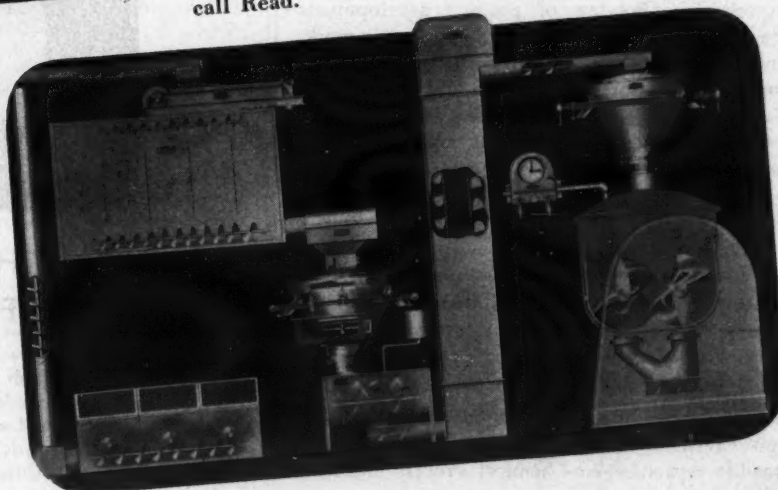
Today's production is wedded to the war effort—it must go on at the greatest speed consistent with high quality. In your own mechanical processing if you find mixing or material handling is a bottleneck just call Read.



DUSTLESS AUTOMATIC WEIGH HOPPERS equipped with patented dust controlling mechanism.

MATERIAL HANDLING EQUIPMENT . . .

Dump bins
Storage bins
Screw and bucket elevators
Screw conveyors
Sifters



PRODUCTION

Grinding Wheels Made Self-Cleaning

Powder dissolved in water or soluble oil; chips settle away from wheel

Uses — For use in wet grinding wheel operations. Designed to reduce necessity of removing wheels from production to be resurfaced and dressed, to absolute minimum. Officially approved and in use in several war production plants.

Features — Keeps grinding surfaces clean for greater efficiency and production. Less tension on wheel. Removes finger prints from work and prevents corrosion by keeping all work in mild alkaline state. Wheels wear uniformly.

Description — Product is in powder form. Added to grinding wheel water, wheels are kept free from foreign substances. Lower surface tension permits particles of metal and chips to settle off wheel surfaces. Makes it possible to grind with soluble oils. Powder is used in proportion of one to five parts water or oil. Product known as "Ever-Drest."

WOLFE-KOTE CO., Dept. CEP, Sheyboan, Wis.

When inquiring specify CEP5891
— see information request blank, pgs. 2-3

Wood Wardrobes for Office & Shop

Easily assembled singly or in batteries, all parts are pre-fit

Uses — As all purpose locker to meet requirements of factory and office employees.

Features — Easily assembled. All parts pre-fit.

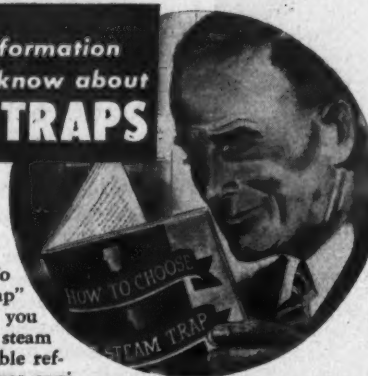
Description — Made of plywood panels dovetailed into Ponderosa Pine framework. Each locker consists of paneled ends, back panel, front panel, including door, bottom shelf, hat shelf, top and divider partition. "Locktite" joint used to assemble batteries of lockers in any number. Door installed with three hinges. Painted two coats olive green. 15" wide, 18" deep, 60" high. Also available with legs which increases height 3". Descriptive bulletin on request.

CURTISS COMPANIES, Dept. CEP, Clinton, Iowa.

When inquiring specify CEP5892
— see information request blank, pgs. 2-3

Read MACHINERY CO., INC.
YORK, PENNSYLVANIA

Contains Information
you need to know about
STEAM TRAPS



The book "How To Choose A Steam Trap" contains information you need to know about steam traps. It's an invaluable reference book for power engineers and owners of steam using equipment. For example: Suppose you want to know how to simplify piping, how to save steam trap installation time, or how to cut down on the number of necessary fittings. You can find the answers in this book. If you want to know the best way to trap a unit heater, pipe coils, fan systems, kitchen equipment, autoclaves, laundry equipment, or submerged surfaces—this book tells you. And in addition you'll find tables giving trap ratings, sizes of traps and various capacities for different uses. Forty pages of condensed easy-to-understand information and it's yours for the asking. Just send us a request on your own letterhead for the book "How To Choose A Steam Trap."

THE V. D. ANDERSON COMPANY
1954 West 96th Street • Cleveland, Ohio

Super-Silvertop STEAM TRAPS

When Inquiring specify CEP5893 — see information request blank, pgs. 2-3

Handbook for Wartime Care of Centrifugal Pumps

Published by
ALLIS-CHALMERS MFG. CO.
Milwaukee, Wis.

FREE! Recognizing the great contribution of maintenance to the war effort, Allis-Chalmers will gladly mail copies of "Handbook for Wartime Care of Centrifugal Pumps" free of charge! Applies to all makes of pumps. Send today for your free copy to Allis-Chalmers, Milwaukee, Wisconsin.

APPLIES TO ALL MAKES

- ★ The how and why of pump construction—how they select pump mounting
- ★ How a change in liquid can kill a pump
- ★ Which way action piping should slope—and why. Tips on how to find leaks
- ★ Common mistakes in packing stuffing boxes
- ★ Quick diagnosis of pump ill... symptoms, causes, proven cures
- ★ New maintenance timetable—adjusted to service
- ★ How tight is "too tight" for a gland?
- ★ How to figure head; with tables of losses in pipes, valves, fittings. Valuable reference
- ★ Little known facts about centrifugal pumps—how to protect pumps against it
- ★ What role of water in a lubricant in pumps

CONTAINS NO ADVERTISING

When Inquiring specify CEP5894 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

Edited for Production and Laboratory
Men in the Chemical Process Industries
VOLUME 6 NUMBER 1

JANUARY-FEBRUARY, 1943

What's In This Issue

Departments:	
New Solutions of Plant Problems	8
Materials — Production & Maintenance	18
Control Instruments & Equipment	26
New Literature — Catalogs and Books	36
Practical Ideas	62
That's Interesting	2-83
Product Directory	3-82
How To Get More Information About Products Described In This Issue	2-3
Advertisers In This Issue	81

How To Use This Issue

If you are particularly interested in a specific type of product, turn first to the Directory of All Products in This Issue on pages 3 and 82. Here is an alphabetical listing of every product, whether it is featured editorially or in the advertising.

Then, to make sure you keep abreast of latest developments, perhaps something you have heard nothing about, you'll want to browse through the rest of the pages.

The Editors have searched far and wide to bring you this comprehensive Preview of product developments of help to you in Chemical Process manufacturing work. Thus, they save your time, enable you to keep posted with a minimum of effort. When you find an item that interests you particularly, and you'd like more information on it, use the handy information request slip between pages 2 and 3. Just check the item that interests you, fill in your name and address and send this slip to the publishers. The information will come to you promptly.

And don't forget . . . when you have finished this issue, pass it on to your associates as they'll be interested, too.

How To Get This Magazine Regularly

Subscriptions to this magazine are NOT SOLD. Its circulation is restricted to men who are actively engaged, in responsible capacities, in Chemical Process manufacturing plants.

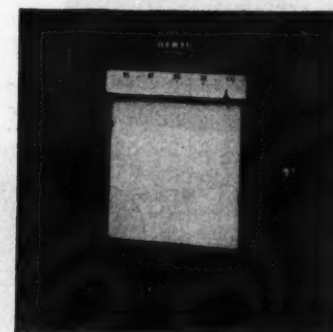
You can receive it free of charge simply by sending your request to the publishers on your company letterhead and telling them of your connection in your Chemical Process plant, if you are a chemist, engineer or executive. Your request subscription will start with the next issue. There is no charge or obligation for this service.

DO YOU HAVE TROUBLES Speeding up Production?

• WHEN a rush of orders comes in or when production lines have to be shifted to a different size package, does your production get jammed? Or is your plant equipped with Alvey-Ferguson Scientifically Planned Conveyors that give endless stream transportation even under unusual conditions? Whatever your product handling problem, our new brochure — profusely illustrated — will give you a "new angle" on it. Write for it today. The Alvey-Ferguson Co., 154 Disney Street, Cincinnati, Ohio.



When Inquiring specify CEP5895 — see information request blank, pgs. 2-3



RECORDING HYDROGEN PURITY IN BEST FOODS PLANT

A continuous picture of the purity of hydrogen, in the plant of Best Foods at Bayonne, N. J., is provided by the Micromax Recorder shown here. The records are extremely accurate, and are used constantly by the operators of the electrolytic hydrogen-generating cells, in maintaining purity of the gas. And, if the Recorder ever detects an undesirable percentage of oxygen, it waits for no operator, but yanks open a valve and runs the main hydrogen supply to atmosphere.

LEEDS & NORTHRUP COMPANY, 4935 STENTON AVE., PHILA., PA.

LEEDS & NORTHRUP

MEASURING INSTRUMENTS • TELEMETERS • AUTOMATIC CONTROLS • HEAT-TREATING FURNACES

Jrl Ad N-91-0890(1)

When Inquiring specify CEP5896 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

**Over 28,000 Circulation
in These Chemical
Process Plants**

CCA

- Brewers, Distillers
- Cellulose
- Cement, Lime
- Ceramics
- Chemicals
- Drugs, Cosmetics
- Fertilizers
- Food Products
- Leather
- Metallurgical
- Paints, Varnishes
- Paper, Pulp
- Petroleum Refining
- Plastics
- Rubber
- Soap

... and allied lines

★

PUTMAN PUBLISHING COMPANY

737 N. Michigan Ave., Chicago, Illinois

Whitehall 5977

★

NEW YORK CITY . . . KENNETH S. KAULL, District Manager, East Coast, 60 E. 42nd St., Vanderbilt 6-5160

CHICAGO . . . C. H. THOMAS, District Manager, Chicago-St. Louis-Minneapolis, 737 North Michigan Ave., Whitehall 5977

CLEVELAND . . . WM. E. COATES, District Manager, Cleveland-Detroit-Toledo, 415 Detroit-Warren Road Building, Academy 6077

CLEVELAND . . . HARRIS N. PICKETT, District Manager, Cleveland-Cincinnati-Pittsburgh-Buffalo-Rochester, 801 Caxton Building, Main 3341

LOS ANGELES . . . J. H. TINKHAM, District Manager, Los Angeles-San Francisco, 1406 S. Grand Avenue, Richmond 6191

★

Art Director H.W. LICHTENBERGER
Assistant Editor JOSEPH L. WHITE
Technical Editor PROF. H. McCORMACK
Assistant Publisher A. W. B. LAFFEY
Vice President EWING W. GRAHAM
President and Publisher RUSSELL L. PUTMAN



What every plant operator should know about GLASS PIPING!

Q: Is GLASS PIPING available now?

A: Yes!

Glass-making materials are still fairly plentiful. And many plant operators are discovering that PYREX Brand Piping not only solves piping shortage problems but also, in many cases, does a better job than the piping they formerly used.

We do need priority ratings that enable us to get accessories (flanges, gaskets), to assign necessary labor, and to establish the position of your order in our production line. With such priorities we have been making 6 to 8-week deliveries.

Available sizes and lengths: 1", 1½", 2", 3", and 4" diameters—and any length from 6 inches to 10 feet (longer lengths on special request). There are corresponding elbows, tees, return bends, and reducers.

Accessories: Joints are compression type—with conical pipe ends compressed to a self-centering gasket by metal flanges and clamping bolts. We supply gaskets of materials suited to the liquid or gas you want to convey.



WHERE DOES IT GIVE BEST SERVICE?

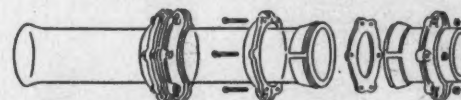
Wherever hot or corrosive liquids or gases must be conveyed . . . wherever products must be protected from contamination . . . wherever it is important to know what is happening inside a line . . . there PYREX Piping gives you its most profitable service.

Chemical plants use it to eliminate their corrosion problems, because it resists all hot or cold acids (except HF). Food and beverage manufacturers like it because it's easy to keep clean, either by simple flushing or with steam or strong hot cleaning solutions. It helps to produce a purer product.

WATCH FOR CORNING ADVERTISEMENTS!

Watch this magazine for more information in Corning's advertisements headed "What every plant operator should know about Glass Piping." And write for PYREX Piping Bulletin No. 814. Industrial Division, Corning Glass Works, Corning, N. Y. Branch Offices: New York, 718 Fifth Ave.; Chicago, Merchandise Mart.

"PYREX" is a registered trade-mark and indicates manufacture by Corning Glass Works, Corning, N. Y.



IS IT EASY TO INSTALL?

Plant workmen have found it easy to make installations themselves. In fact, green plant mechanics have recently done first-rate installations with PYREX Piping.

You may install from one piece to a whole system—for PYREX Piping may be joined to existing metal lines and equipment. And it is hung and supported much like other types of piping. (See photo at top of page.) We do recommend that hangers and supports be padded, to minimize scratching.



WILL IT STAND UP MECHANICALLY?

Yes. PYREX Piping is recommended for working pressures up to 100 p.s.i. But glass in this form is not as strong as metal. So, care must be taken to avoid installation strains or sharp impact. Nearly 20 years of service under all kinds of plant conditions have proved that only simple common sense and reasonable care are required to handle PYREX Piping without trouble. The glass itself, incidentally, is very hard—about twice as resistant to abrasion as ordinary plate glass. Thus, the piping is particularly suitable for abrasive, corrosive slurries. You can install and use PYREX Piping with confidence.



WHAT DOES IT COST?

The initial cost of PYREX Piping (accessories included) is about the same or less than the cost of full-weight copper or brass piping, in comparable sizes, and is considerably less than the cost of stainless steel.

And because PYREX Piping does not wear out under acid attack, it gives long trouble-free service, with resultant low long-time cost.

The left-hand photograph at the top of the page is an example. That PYREX Piping has carried a slurry of crushed quartz and sulfuric acid for over eight years—without one cent of maintenance.

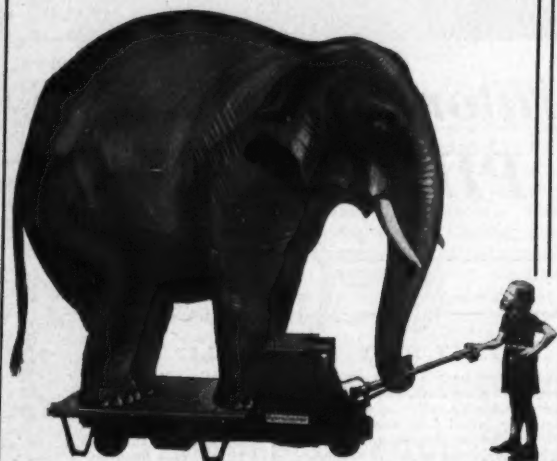
CORNING
Glass Works

Corning, New York

Purex Industrial Glass

When inquiring specify CEP5897 . . . see information request blank, pgs. 2-3

with the
GREATEST
of EASE!

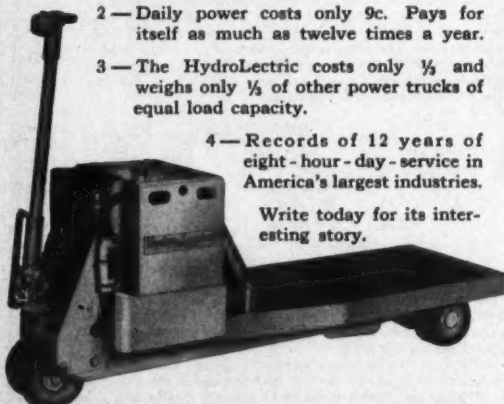


A mere child can move "Elephant" loads easily — quickly — safely — with the HydroLectric made only by Stuebing at Cincinnati, Ohio.

If "tough" loads like this can be moved, think how easy it will be to move your regular loads with HydroLectrics. Consider these features:

- 1 — One man moves four times as much in a day as he can with any hand pulled truck. Saves up to 80% of material moving costs.
- 2 — Daily power costs only 9c. Pays for itself as much as twelve times a year.
- 3 — The HydroLectric costs only $\frac{1}{2}$ and weighs only $\frac{1}{2}$ of other power trucks of equal load capacity.
- 4 — Records of 12 years of eight-hour-day-service in America's largest industries.

Write today for its interesting story.



LIFT TRUCKS

INCORPORATED

W. C. STUEBING, President

2425 Spring Grove Ave., Cincinnati, Ohio

Stuebing also manufactures hand lift trucks (not motorized) in capacities up to 8000 pounds.

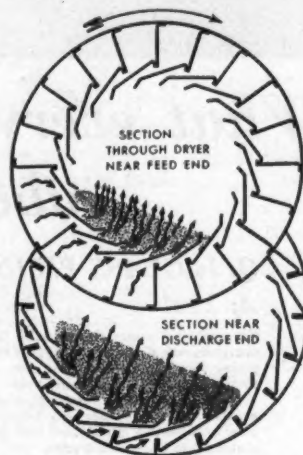
When inquiring specify CEP5808 — see information request blank, pgs. 2-3

New Solutions of Plant Problems

36,000 Lbs. Sugar Per Hr. Dried in Louvre Unit to 3/100% Moisture

Improves over former equipment in capacity, space requirements, reduction of fines and brightness

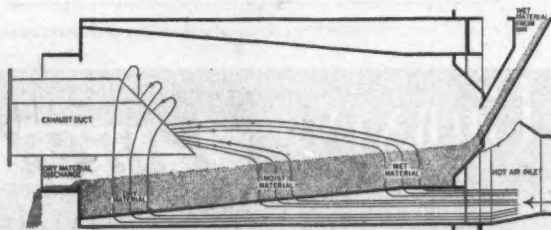
Problem — Sugar refinery sought to increase capacity and overall efficiency of dryers, reduce fines and obtain a more brilliant sugar. The equipment regularly employed included a centrifuge which dried the finished sugar to 1 to 2 percent moisture content, a shell type dryer, for the next handling, in which air passed counter-flow to the direction of travel of the sugar and a rotary shell, on the floor below, the primary function of which was cooling. Counter-flow passage of air blew



LOUVRE PLATE DESIGN in dryer makes material travel spiral path

dust back over wet material. Crystals were scratched by the cascading action of the rotating shell.

Solution — A special type of dryer employing what is described as Roto-Louvre design was installed. It consists of an outer cylindrical shell or drum similar to the conventional type. From the inner circumference of this drum full length plates, tapering in width, project radially. To these radial plates are attached full length tangential plates which overlap to form a circular inner shell of gradually increasing diameter, upon which the material rests during its progress through the dryer. The space between the outer and inner shells of the Roto-Louvre dryer is partitioned into many longitudinal compartments or channels gradually diminishing in depth toward the discharge end. Each channel is open at the feed end for the introduction of hot air but closed at the opposite end. These are hot air passages and they are designed so that each has a continuous slot-opening through the louvres. The louvres are shaped and mounted so as to prevent material from falling into the hot air channel. Dryer is fed from overhead screw conveyor. As both shell and conveyor are equipped with variable speed transmission they can be closely synchronized. The sugar is fed at a uniform rate into the inner drum, over the louvre plates. While the dryer rotates the bed of material is



ROTO-LOUVRE DRYER — longitudinal section — shows flow of material, gases and slant of inner shell

slowly tilted in the direction of rotation. The upper side of the bed becomes unbalanced, causing it to roll over onto the top surfaces. The sugar travels a spiral path to the discharge end and material particles do not remain in contact with louvre plates. The Roto-Louvre dryer combines the advantages of heat exchange by convection. A large volume of dry hot air penetrates the relatively thin bed of material near the feed end of the dryer for maximum heat transfer where greatest evaporation can take place. As the material moves forward bed becomes thicker. The reduced heat penetrating prevents overheating. Hot air inlet connector includes a segment of about 90 degrees where it meets dryer shell so as to distribute hot air only to those passages which are underneath bed of material. Louvre shell is subject to heat only one fourth of the time. There is practically no loss of heat due to radiation. Exhaust air can be removed in various ways depending on conditions. In illustration shown here an exhaust duct projecting into drum is indicated. From the dryer sugar is discharged to vibrating screens and then to conveyors extending to packaging operations.

Results — One Roto-Louvre dryer unit — this model is 18 ft. long, 6 ft. diameter, rotating one to 6 times per minute from electric motor — replaced two conventional dryers providing greater capacity and saving floor space. Discharge capacity of dried sugar 36,000 lbs. per hour. Moisture evaporated 545 lbs. At dryer inlet: sugar 1.5% moisture. Temperature 120° F. Inlet air 245° F. At dryer outlet; sugar 3/100% moisture content, temperature 130° F. Outlet air 135° F. Shell operating at 2 r.p.m. Clearer, cleaner crystals. Less fines in product. Less sugar (fines) lost through exhaust air-stack of dryer. More attractive product for consumer and commercial use. Illustrated booklet, No. 1911, 24 pages, giving specifications and applications, available upon request.

LINK BELT CO., Dept. CEP, 307 N. Michigan Ave., Chicago, Ill.

When inquiring specify CEP5809 — see information request blank, pgs. 2-3

Humidifier Controls Moisture In Flour Mill, Prevents Explosions

Maintains moisture content of flour within limits specified by authorities

Problem — Large flour milling organization encountered difficulty in keeping moisture content of flour within the minimum specified by government pure food authorities for best baking.

Solution — Plant humidifying equipment was installed through which moisture content of the air is closely controlled. Equipment embodies a central plant humidifier providing a system branching from a first floor machine room installation with duct work to all floors of the building. Manual controls are used to limit or increase the air brought into the plant, while moisture on each floor is controlled through the use of individual hygrometers.

Results — Since installation of this system over-moist or under-moist batches of flour are a rarity. An additional advantage gained is maintenance of plant atmosphere below point where explosive combustion might result. Reduction of dry dust of freshly milled flour which when accumulated in quantities creates an explosion hazard.

CARRIER CORP., Dept. CEP, Syracuse, N. Y.

When inquiring specify CEP5900 — see information request blank, pgs. 2-3

APPLICATIONS

Lubricant Solution Keeps Conveyor Chain Clean, Stops Breakage

Prevents bottles from smearing, scratching and breaking; reduces need for chain cleaning

Problem—Mid-west plant desired to overcome conveyor chain troubles which were due to lubricant. Rapidly built up accumulations of heavy, black soap-grease was smearing bottom of bottles; chain traveled sluggishly. Bottles had tendency to rub and twist, causing scratching, chipping and breakage. Where chains were old with worn pins and other results of extended service there was occasional chain breakage. Accumulations developed so rapidly that frequent cleaning, either by hand scrubbing or steam pressure cleaning, was necessary.

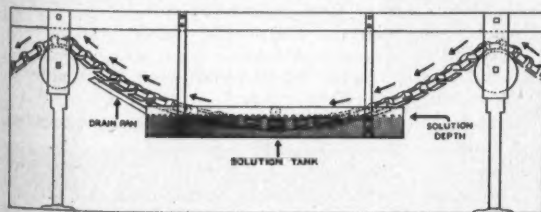
Solution—Thoroughly cleaned chains and adjusted them to locate slack at a favorable position for installation of dip tank, through which chains would travel. Charged tanks with lubricant solution made up of two ounces of special paste lubricant composition to the gallon of water. This method of application keeps the chains constantly moist or wet with a practically invisible film of lubricant which has ample "slip" for bottles, and helps minimize their rubbing, twisting and twirling. The lubricant does not of itself build up accumulations on the conveyor chains. As the chains are constantly returning to travel through the dip tank dust, dirt and other foreign matter which may have been deposited is rinsed off to settle at the bottom of the tank. Chains come out of the solution freshly coated with lubricating film. A container of ready-mixed solution is kept on hand for tank up-keep. When desirable limit of sediment accumulation is reached, tank is drained, flushed out, replaced and refilled with solution. This operation is performed quickly without interruption to production and usually is necessary only after long working schedule. Only bearings or axles of sprockets require regular greasing.

Results—Production maintained at regular conveyor capacity. Bottles are cleaner and brighter, no hand wiping required and scratching and breaking is practically eliminated. Conveyor chain kept in sanitary condition. Chains now give uninterrupted service for days where several mechanical failures during a shift had formerly been experienced. Slight additional cost per pound of new lubricant is offset by smaller amount required per hour of operation—about one pound every 9 hours to 5 for the old lubricant.

Another Application—If desired tank can be suspended from conveyor or framework as shown in illustration. A drip tank is another method of application that is used in many cases. Descriptive folder on "Oakite Composition No. 6" available upon request.

OAKITE PRODUCTS, INC., Dept. CEP, 27A Thames St., New York, N. Y.

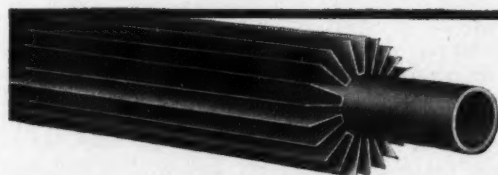
When inquiring specify CEP5901—see information request blank, pgs. 2-3



CONVEYOR CHAIN LUBRICATION . . provided by special solution in dip tank



DESIGNED AND MANUFACTURED BY BROWN FINTUBE ENGINEERS



Brown Fintubes with their exclusive welded construction, that provides an integral bond of metal between the fins and central member—resulting in high thermal efficiency and trouble-free operation, are used in all Brown Fintube heat exchangers and are available also in heat exchangers built by most other manufacturers.

In addition, Brown Fintubes can be substituted, in existing heat exchanger shells for plain bare tubes by making a few simple changes in tube sheets, etc.—and are available in an almost infinite variety of lengths, tube OD's, wall thicknesses, number and depth of fins—and in mild carbon or special steels to meet practically any heating or cooling requirement. Write for our fully descriptive catalog.

● The unprecedented demand for heat exchangers, due to the war, has created a "sold out" condition in the industry, resulting in long delayed deliveries, even to customers having high priorities. To help relieve this critical situation, The Brown Fintube Co. will build and sell complete, ready-to-use heat exchangers for the duration, as a service to buyers who cannot get needed equipment from their usual sources of supply.

Brown Fintube Heat Exchangers will be furnished in various types to meet a wide variety of heating and cooling requirements and will employ Brown welded, integrally bonded Fintubes, in all cases, which instantly assures their high thermal efficiency and trouble-free operation. All heat transfer calculations will be made by engineers with long experience in this work—having the advantage of our thoroughly equipped heat transfer laboratory for making test runs, etc.

We solicit your inquiries which will receive our careful and prompt attention—Write . . .

THE BROWN FINTUBE CO.

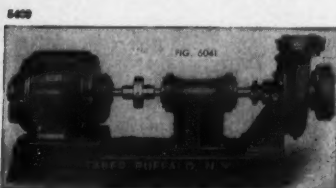
119 FILBERT STREET

ELYRIA, OHIO

When inquiring specify CEP5902 . . . see information request blank, pgs. 2-3

Will your pumps be obsolete?

Many plants will one day face costly "one-purpose" pump waste. To reduce this waste, Taber Pumps are designed for wide adaptability... merely changing Impeller and Casing fits them for various services. This feature, plus time-proved, high practical performance, make Taber Pumps more suitable for the processing industry. For detailed, helpful information on this new Taber series "General-Use" Horizontal Centrifugal Pumps—write for Bulletin CLVS-339.



← **TABER "GENERAL-USE" CENTRIFUGAL PUMP.** Never obsolete. Easily adapted to many jobs. Has over-size ball bearings, extra shaft diameter, deeper stuffing box.

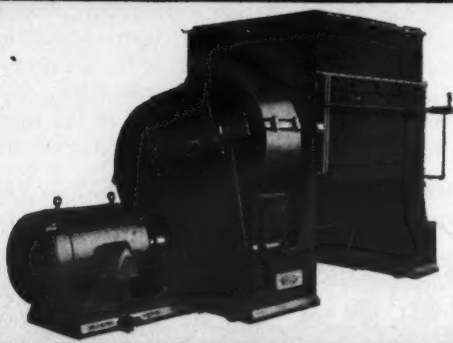
TABER PUMP CO.
(Est. 1859)
320 Elm St., Buffalo, N.Y.

When Inquiring specify CEP5003 — see information request blank, pgs. 2-3

Victory Formula PRODUCE MORE • BETTER • FASTER

This large 38,000 pound mixer meets all the requirements of the Victory Formula. It is speeding production of light metals in many plants and has a production so much greater than expected that ten of these machines will outproduce fifteen mixers of similar capacity but of less modern design.

This is but one example of the way Baker Perkins Engineers, by drawing on their many years of mixer experience, develop special machines to handle today's production problems.



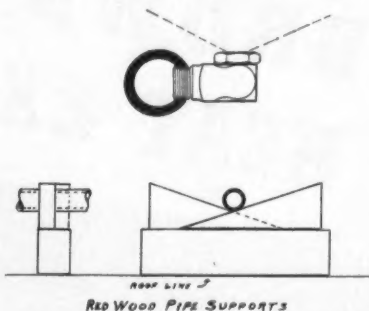
BAKER PERKINS INC., Saginaw, Michigan

When Inquiring specify CEP5904 — see information request blank, pgs. 2-3

APPLICATIONS

Roof Spray Reduces Solar Heat, Cuts Air-Conditioning Cost 20%

System also effective on non-air cooled buildings;
wood frame pipe supports save cutting roof



ROOF SPRAY . . . adjustable nozzles, piping supported by wood frame

Problem — To reduce absorption of solar heat by flat roofs of blackout type industrial buildings to improve working efficiency and decrease air conditioning requirements.

Solution — Spray canopy system installed. Steel (instead of brass) pipe. $\frac{3}{8}$ in. size used throughout. All distribution piping placed above roof, eliminating dripping of condensation on building interior. Nozzles selected to handle available water ranging from 1.1 to 1-1/3 gpm. Nozzle pressures varying from 4 to 7 lbs and spray height from 1 1/2 ft. to 2 1/4 ft. Diameter of coverage 11 to 15 sq. ft. Nozzles connected to feed pipes through adjustable ball joints making it possible to have Tees slanted down to give complete drainage. Also permits change in plane of spray where desired without breaking into the pipe system. Only tool required is screwdriver. Instead of the usual pipe supports which have to be screwed or bolted to roof a special Redwood support is used. It rests on top of the roofing and adjustable wedges provide for positioning piping for best drainage. Placing all main supply lines above roof reduces roof penetrations and makes adjustment of operating valves easier. Nozzles are of non-clogging design, provide a fine spray at low pressures. Removable screw caps for easy cleaning. This same type of spray canopy is used on building without air conditioning with good results. The cooling effect within the building is not due to the water temperature but to solar heat being absorbed by evaporation of spray before such solar heat enters the roof. This contrasts in principle to past suggestions that roofs be flooded to depth of two inches, in which case water heats up, is only half as efficient as spray and often does not drain causing water to become stagnant. Water economy of the spray is such that in most cases this is not a factor. Where necessary water may be recovered and re-circulated. In the case of the large buildings cited here waste water from condensers or cooling system was used.

Results — Refrigeration tonnage required reduced from 1080 to less than 800 tons. Savings at basic price of \$200 per ton totaled \$56,000. Cost of spray system was less than \$20,000 and operating and maintenance expense are modest. Similar spray installed on non-airconditioned buildings reduce interior temperatures approximately 10 and as much as 15 degrees. Tests indicate that sprayed roofs absorb about 10 percent as much heat as dry roofs. Life of roof covering increased by preventing excessive expansion and contraction and loss of volatile oils.

WATER COOLING CORP., Dept. CEP, 71 Nassau St., New York, N. Y.

When Inquiring specify CEP5905 — see information request blank, pgs. 2-3



BIRD Continuous Centrifugal FILTER

are stepping up production of essential war materials such as

Ammonium Nitrate
Barytes
Bauxite
Beryllium
Cement
Chlorine
Chromates
Cryolite
Explosives
Fats and Greases
Fluorspar
Glycerine
Lime

Magnesium
Manganese
Mercury Salts
Phosphates
Pigments
Potash
Sodium Chloride
Sodium Sulphate
Synthetic Resins
Synthetic Rubbers
Tin (Recovery)
Vitamins

Find out what the Bird Filter can do to better YOUR war production job. Get in touch with

BIRD MACHINE COMPANY
SOUTH WALPOLE • MASSACHUSETTS

When Inquiring specify CEP5906 — see information request blank, pgs. 2-3



"Man" Your Elwell-Parkers—the New Way

Your men are being siphoned off—into other Plant into the Armed Services. But your loads must keep—*they will*, because we're helping you to train w to operate your Elwell-Parker Trucks in the Emerg

An Elwell-Parker Representative will give preliminary instructions. Bulletin "Lady—will you Give a Lift?" tains full particulars. A Service Man will inspect Elwell-Parkers and recommend interchangeable placement parts. Write today.

The Elwell-Parker Electric Company, 4239 St. Clair Avenue, Cleveland

ELWELL-PARKER Power Industrial TRUCKS

When Inquiring specify CEP5907 — see information request blank, pgs. 2-3

APPLICATIONS

Patches in Foundry Floor Holds 5 Tons

Durable plastic materials is easily applied with little interruption to traffic

Problem — Concrete floor of steel warehouse broken, worn unevenly in many spots. Heavy accumulations of gummed oil. Depressions and general floor conditions hampered traffic.

Solution — Special plastic floor material was used. Depressions were leveled with plastic fillings with feather edges, packed and dusted with Portland cement. Patches were tamped, heavy ones rolled with rollers bearing about 150 lbs. linear inch of bearing width. Grease removed with sidewalk scrapers. Surface wire brushed to clear concrete; primed filled and tamped with traffic passing through. No chemical cleaning used.

Results — Reconditioned floor gave service under conditions involving loads up to 10,000 lbs. Traffic frequently included heavy trucks with center bearing wheels 14" x 4". Floors easily maintained as new material may be placed over old by same method as for new work. Complete information regarding specific applications and requirements available on request.

DURA-TRED CO., Dept. CEP, 3508 Carroll Ave., Chicago, Ill.

When inquiring specify CEP5908
— see information request blank, pgs. 2-3

Gearless Self-Priming, Flexible Impeller Pump

Four-page, two-color bulletin describes features and contains sectional photos of gearless, self-priming pumps, featuring flexible impeller and adapted to a variety of uses in handling chemicals, coolant, food products, beverages, paper products and in air-conditioning operations. Detailed drawing and tables give complete specifications for easy estimate of requirements. Bulletin available on request.

JABSCO PUMP CO., Dept. CEP, 8306 Wilshire Blvd., Beverly Hills, Cal.

When inquiring specify CEP5909
— see information request blank, pgs. 2-3

For more information on product at right, specify CEP 5910
... see information request blank between pages 2-3.

ILLINOIS Chemical PORCELAIN

GET YOUR COPY OF THIS BOOK TODAY

Ever have trouble or expense in your plant with chemical reactions on metal valves and piping? Want to get rid of this heavy replacement cost — PERMANENTLY?

Then get this data book today showing how to substitute porcelain pipe and valves that are impervious to all chemical action except hydrofluoric acid. There's no cost or obligation. Copies will be sent while our limited supply of these books last. Don't be too late. Write for your copy of data book C. P. today — now.

Illinois Electric Porcelain
Macomb Illinois

FILTERS

r materials

um
ese
Salts
tes
ts
h
loride
lphate
Resins
ubbers
very)
ns

ter YOUR

PANY
HUSSETTS

blank, pgs. 2-3



W Way!

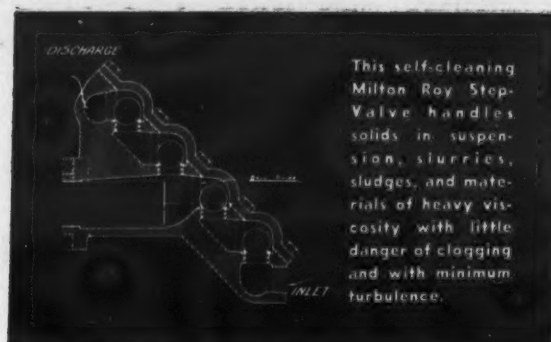
er Plant jobs;
must keep zip-
to train women
e Emergency!
e preliminary
e a Lift?" con-
inspect your
angeable re-

ue, Cleveland, Ohio

TRUCK

blank, pgs. 2-3

PREVIEW



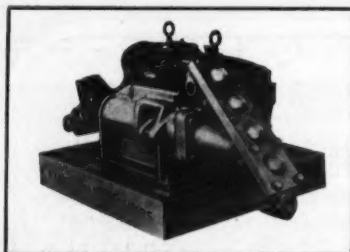
This self-cleaning Milton Roy Step-Valve handles solids in suspension, slurries, sludges, and materials of heavy viscosity with little danger of clogging and with minimum turbulence.

This STEP-VALVE Makes Milton Roy Pumps "Tick"

Note how pumped materials pass through double-ball checks in four distinct steps. These checks act instantly. Each pair open and close practically simultaneously. They seat positively, not only when pumping clear liquids but also in handling slurries, etc. Should the liquid contain solids of sufficient size to prevent a ball from properly seating these would, of course, lodge in the first inlet check. The other checks continue to function as usual. Then the full pressure of the incoming liquid, on the following suction stroke, is exerted against the solid matter and clears the ball and seat. All Step-Valves are of this same basic design.

Milton Roy Pumps are recommended for handling

- SLURRIES
- SLUDGES
- ASPHALT
- VARNISH
- LATEX
- SOLIDS in SUSPENSION



and other materials which are extremely difficult or impossible to pump by other means . . . as well as for acids, alkalis, solvents, oils, fluid greases, etc.

This Step-Valve (patented) is not only self-cleaning and non-clogging, but air-binding is impossible and wire-drawing is eliminated.

Step-Valves are available in all metals that can be cast or forged and machined. They may be machined from the solid . . . metals or plastics . . . and may be jacketed for temperature control.

Investigate Milton Roy Pumps . . . for chemical services, for use where exact volume control is necessary, for hydrostatic test purposes up to 20,000 lbs. per sq. in. Write for catalog or ask for recommendations.

We are still making prompt deliveries of most standard units. If we can help in your war production write, 'phone or wire.

MILTON ROY PUMPS

1363 E. MERMAID AVE., CHESTNUT HILL, PHILA., PA.

When inquiring specify CEP5911 — see information request blank, pgs. 2-3

New Solutions of Plant Problems

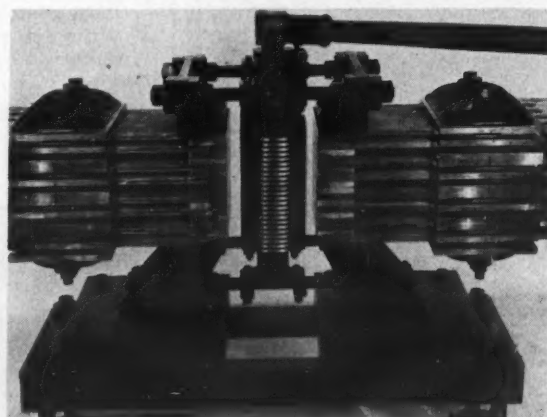
30,000 Ampere Switch Disconnects Cells in Electrolytic Processes

Opens, closes; voltage under 10v; contacts advance, seat on new points automatically, butted joint contacts maintain straight current flow

Problem — Equipment company was to furnish 30,000 ampere switches for disconnecting cells in electrolytic processes, — to be carried continuously without any undue rise in temperature. Also, to close as well as open the 30,000 amperes with not more than 10 v. potential difference across switch in open position. Reasonable amount of wear and burning should not unduly limit life. Also, specified was manual operation with little effort and portability.

Solution — To provide for wear and burning, contacts were designed so that they would automatically advance and seat on new points to assure clean and perfect contact surfaces. For the desired manual operation and avoiding waste of energy in lifting the great weight of the switch blades, the blades were pivoted in the center, allowing all the manual effort to be applied to contact pressure of the switch contacts. To compensate for sloping of floor or other unevenness mounting adjustments were provided. Easy disconnection and reconnection was made possible by special clamping. To keep heat losses at a minimum in addition to having sufficient cross sectional area in the contacts it was desirable to keep the current flowing in as straight a line as possible. A large number of butted joint contacts were the answer to this streamlined current flow. Also, it was provided that each unit of the blade as well as each unit bar of the clip carry proper share of total amount of current in switch. Two individual switch bases were used instead of one, in order to have full, unobstructed air flow to the switch contacts. Switch designed so that strain or load of contact pressure was entirely taken up by insulated tie rods from switch clip to switch clip, so as to be absolutely neutralized, as well as self-contained.

Results — Switches have carried 30,000 amperes continuously and delivered service specified. Manual operation with least amount of manual effort. Cool running. Less critical material used. Strain from butted joint contact pressures not applied to any porcelain insulators or insulating switch bases in general. (Switches in capacities of 5000 to 50,000 now available, modified and so designed



SWITCHES IN WIDE RANGE — 6000 — 50,000 AMPERES

to fit individual installations. The whole range of amperes can be met with the same unit design, simply by adding more members of the same units to meet ampere capacity required.)

ELECTRICAL ENGINEERS EQUIPMENT CO., Dept. CEP, 25th & Division St., Melrose Park, Ill.

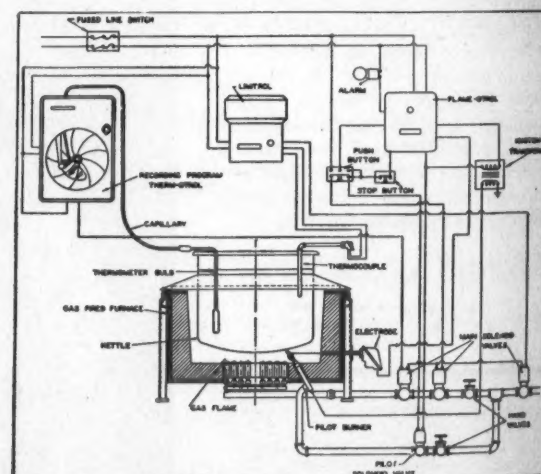
When inquiring specify CEP5912 — see information request blank, pgs. 2-3

Automatic Temperature Program Control for Processing Kettles

Provides various desired temperatures throughout period, keeps record, protects against burning of material and explosion hazards

Problem — Automatic temperature cycle or program control applications for processing kettle, salt bath heat treatment or pot type furnaces are desired to provide required temperature at any period in the process regardless of the temperature variations required; provide a record of temperatures experienced during the cycle; to give excess temperature shut off protection and protection against burning materials with low flash points or in event of fuel valve or instrument failure; to eliminate combustion hazards. Should be applicable to gas or oil fired equipment.

Solution — Enforcement of desired heating or cooling cycle is achieved by recording program temperature control. A transparent rotating disc contoured so as to change position of the temperature control index as it rotates affects the program or cycle control. An index arm with a small wheel that rides on the outside edge of the disc, changes the control setting to produce the heating or cooling cycle called for by the rotating disc. The transparent disc is mounted directly over the chart of the recording instrument so that the pen and pen arm are between the disc and the chart. One motor and drive available for any time period rotate both chart and disc. Thermometer bulb of the recording program control is suspended in the material being processed. When the control calls for heat, a solenoid valve, in the main fuel line just before the main burner, releases fuel that is ignited by a continuous pilot burner. When temperature has reached the level called for



TEMPERATURE CYCLE CONTROL INSTALLATION

CHEMICAL EQUIPMENT PREVIEW

New Applications

in that period of the process, the control closes the solenoid valve, main burner goes out, pilot burner remains ignited. Pilot failure which would involve explosion hazard is prevented by "Therm-otrol" electrode and pilot combination. Pilot flame completes circuit which if interrupted causes solenoid valves to cut off fuel. A bell rings when fuel is shut off. In case of excessive temperatures "limitrol" shuts down entire system until temperature is reduced to safe limits. Instrument is actuated by thermocouple suspended in kettle. The "limitrol" instantly operates solenoid valve.

Results — Accurate, automatic temperature cycle control secured. Temperatures during cycle recorded. Protection against excessive temperatures, flame failures and combustion hazards.

WHEELCO INSTRUMENTS COS., Dept. CEP, 841 W. Harrison St., Chicago, Ill.

When inquiring specify CEP5913 — see information request blank, pgs. 2-3

Scraping Steam Jacketed Kettle Aids Thorough Heating of Product

Keeps material from sticking to walls and retarding heating; higher yield achieved



STEAM JACKETED KETTLE . . . scraper removes material sticking to walls

Problem — In making certain product in direct fire heated kettles, local overheating, charring or burning of material which stuck to walls necessitated dilution of product to filter out burned pieces and then concentration in steam heated equipment to consistency suitable for delivery. Attempts to use steam jacketed kettles of older design had proved unsatisfactory as insulating action of portion of batch which stuck to walls made it difficult to drive heat into material.

Solution — Experiments of equipment manufacturer showed that the product could be made in steam jacketed kettles providing their heated surfaces were kept scraped clean. Positive scraping, right down to the bare metal, permitted product to be made with steam heat.

Results — Need for high temperature heating eliminated. Higher yield because of no loss from overheating. No diluting, filtering or concentrating. Product drawn directly from scraped kettles into shipping containers.

SOWERS MFG. CO., Dept. CEP, 1301 Niagara St., Buffalo, N. Y.

When inquiring specify CEP5914 — see information request blank, pgs. 2-3

Domestic Natural Colloidal Graphite for Industrial Lubrication

Eight-page-pocket size folder contains an interesting and practical discussion of the application of colloidal graphite in industrial lubrication and of the recent gratifying achievements in producing it domestically. The folder describes in detail fifteen colloidal graphite products including lube oil, castor oil, glycerine, penetrating oil, kerosene, cold plate, alcohol suspensions and other colloidal graphite combinations. Folder and additional information available upon request.

NASSAU LABORATORIES, Dept. CEP, Hackensack, N. J.

When inquiring specify CEP5915 — see information request blank, pgs. 2-3

Abstracts on Ceramic Glazes

Abstracts from more than eighty publications, some of them foreign, give comprehensive treatment to authoritative papers on ceramic glazes. Book divided into several sections, each covering one publication, the first being that of American Ceramic Society. Books, Patents, Government specifications are dealt with. Cross index makes it possible to locate desired material quickly. "Literature Abstracts of Ceramic Glazes." (Drs. J. H. Koenig — W. H. Earhart) Price — \$4.00 per copy.

CERAMIC INDUSTRY, Dept. CEP, 58 East Van Buren St., Chicago, Ill.

When inquiring specify CEP5916 — see information request blank, pgs. 2-3



Star PERFORMERS
WHERE PRODUCTION
IS SKYWARD

Stop loss of steam, dribbling, and evaporation where plants are operating at accelerated war production. Precision features also prevent Freeze-ups, Water-Logged Units, Air-Binding and Adjustments. Stop-up process production as much as 30%. Four types. Sizes 1/4" to 2". Pressures from vacuum to 300 lbs. Write for technical Bulletin No. 242.

W. H. NICHOLSON & CO., 181 OREGON ST., WILKES-BARRE, PA.

NICHOLSON Traps
THERMOSTATIC V-PISTON AND WEIGHT-OPERATED STEAM
GASOLINE AND COMPRESSED AIR TRAPS
CONTROL VALVES V FLOATS V MANDRELS V STEAM AND AIR SEPARATORS

When inquiring specify CEP5917 — see information request blank, pgs. 2-3

.....no backlash

Patented construction of Baldwin Roller Chain Flexible Coupling permits amazing flexibility without destructive backlash.

Note how one strand has cylindrical rollers and the other strand over-size convex rollers that have line contact only against the sprocket teeth. This allows true torsional flexibility and *eliminates direct shear stress on the pins.*



Write today for a copy of our catalog M—120 pages of valuable engineering data, including a comprehensive section on Flexible Couplings—or CALL THE B-D MAN.



Compensates for ordinary angular and parallel misalignment with no measurable loss of power.

BALDWIN-DUCKWORTH • DIVISION OF CHAIN BELT COMPANY • SPRINGFIELD, MASSACHUSETTS

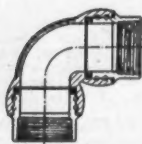
BALDWIN ROLLER CHAIN BELTS . . .

When inquiring specify CEP5918 . . . see information request blank, pgs. 2-3

Right down Your alley

If you require flexible lines for handling liquids, vapors or gases, CHIKSAN Ball-Bearing Swing Joints are what you need. They save manpower, critical materials and replacement cost.

You can build your own flexible lines with CHIKSAN Swing Joints and pipe you have on hand. With full 360° rotation in 1, 2 and 3 planes, there is a CHIKSAN Swing Joint for every need. And there are over 500 different types,



Style No. 60 Swing Joint
2-Way Swivel

styles and sizes for every kind of service, from vacuum to 3000 lbs. working pressure and temperatures to 700° F.

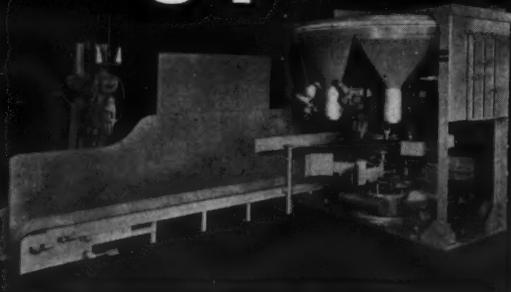
Write for Complete Engineering Data
REPRESENTATIVES IN PRINCIPAL CITIES
DISTRIBUTED NATIONALLY BY CRANE CO.



When Inquiring specify CEP5019 — see information request blank, pgs. 2-3

Increase your
Bagging Production
AS MUCH AS 50%

WITH THE **CONSOLIDATED**
Model **84 Super-Bagger**



WRITE FOR INFORMATION

CONSOLIDATED
PACKAGING MACHINERY CORP.
400 WEST AVENUE, BUFFALO, N. Y.

When Inquiring specify CEP5020 — see information request blank, pgs. 2-3

APPLICATIONS

Portable High Vacuum Gauges

High Vacuum gauges for use either as portable instruments or on fixed mountings are given interesting descriptive treatment in two-page-four-color bulletin. Use for easy checking of vacuum system at various points to determine fall in pressure, whether pipe lines are of adequate size or have leaks, whether pumps are drawing desired vacuum and other related applications are described. Important features include wide application, accurate readings, within micron range, in few seconds, portability without danger of damage, easily mounted, mercury always at proper level. Large detailed photos and complete specification and price information. Bulletin 42 G available upon request.

F. J. STOKES MACHINE CO., Dept. CEP, Oney P. O. Philadelphia, Pa.

When Inquiring specify CEP5021 — see information request blank, pgs. 2-3

Colloid Treated Fabric Used to Repair Metal Casting Patterns

Double napped flannel, impregnated with cellulose nitrate easily shaped when wet with solvent

Problem — Pump manufacturer, obliged to discard many patterns because repairs or alterations were expensive and unsatisfactory. Material and methods that would salvage such patterns was sought.

Solution — The answer was found in a colloid treated fabric that had for years been used to give strength and resiliency to the box toes of shoes. This plastic is a double-napped cotton flannel, similar to a cotton blanket, impregnated with a cellulose nitrate and a fire-retardant making it slow burning. Wet down with a solvent it may be formed into the shape of the pattern with the fingers or a shaping tool. It has a hard even surface on drying and may be lightly sanded and shellacked for a smooth surface. The material will dry in 25 minutes with some solvents but longer drying periods are recommended. It may be reworked or removed entirely by again wetting it with solvent.

Results — Patterns repaired by this method that formerly would have been discarded now give satisfactory service for as many as 200 castings and still remain in good condition.

E. I. du PONT de NEMOURS & CO., Dept. CEP, Wilmington, Del.

When Inquiring specify CEP5022 — see information request blank, pgs. 2-3



DAMAGED WOOD PATTERN . . . repaired for extensive service with colloid treated fabric

What vacuum
do you want?



Get it with
ELLIOTT
Steam Jet
EJECTORS

Single-stage ejectors as illustrated, can pull low to medium vacuum.

Two, three, or four-stage ejectors get high vacuum. Elliott ejectors are connected up almost as easily as a pipe fitting. No moving parts, no maintenance troubles. Tell us the vacuum you want, steam and cooling water conditions, process requirements.

When Inquiring specify CEP5023 — see information request blank, pgs. 2-3

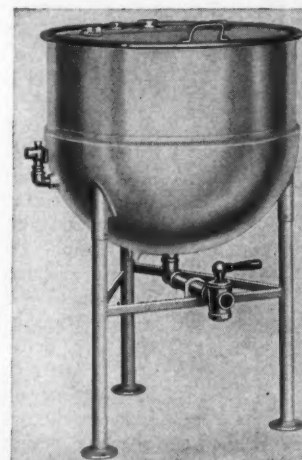


ELLIOTT
COMPANY

Heat Transfer Dept.
JEANNETTE, PA.

District Offices in
Principal Cities

G-373



**BUILT
BETTER
TO SERVE
BETTER**

TYPICALLY GROEN Quality from top to bottom. Identical in features with our famous 2/3 Jacketed Stainless Steel Models . . . but constructed of Stainless-CLAD Steel so only the inner surface which contact food are of Stainless Steel, with outer Steel surfaces finished in brilliant heat-resisting enamel . . . an idea pioneered by GROEN to conserve critical materials.

DESIGNED FOR TODAY Uses only a fraction of the chrome and nickel usually required. Conforms to U. S. Navy specifications. All the sanitary features of our Stainless Steel kettles. Same dairy-type draw-off. Jacket and stand of steel. Outer surface brilliant in sanitary heat-resisting enamel. Get details.

GROEN
DEFENSE
KETTLE

ALL GROEN Models made in Stainless Steel-CLAD material. If your requirements are covered by the necessary priority, we'll do our best to serve you promptly.

SEND FOR OUR NEW
KETTLE CATALOG

Shows the best in modern kettle design. See it before buying. Ask for a copy today.

GROEN MFG. CO. (HALF A CENTURY OF FINE KETTLES)
4537 West Armitage Avenue, CHICAGO, ILLINOIS

When Inquiring specify CEP5024 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

APPLICATIONS

Dissolving Under Pressure Permits Use of Cheap Gum

Superior product made with simplified equipment

Problem — Manufacturer's product involved use of gum which was put into solution by placing it in boiling solvent, with a reflux condenser to catch the solvent and prevent its loss. Equipment company engineers noted that continually vaporizing and condensing solvent indicated waste of heating and cooling energy and recommended that vapor be kept in under pressure, which would have to be determined by test.

Solution — Test on semi-plant scale was made and pressure was shown to be nominal and that recommended procedure made a superior product.

Result — Product now manufactured with simplified equipment, lower operating costs and making possible use of gum costing 4c against 15c for the former grade.

SOWERS MFG., Dept. CEP, 1301 Niagara St., Buffalo, N. Y.

When inquiring specify CEP5925
— see information request blank, pgs. 2-3

Turret Lathe Catalog

48-page-catalog, heavy fibre cover describes line of engine, toolroom and turret lathes. Each size and type illustrated. Attachments, tools, accessories listed. Catalog 100 B SOUTH BEND LATHE WORKS, Dept. 9Y, South Bend, Ind. sent on request.

When inquiring specify CEP5926
— see information request blank, pgs. 2-3

Evaporators, Filters and Crystallizers

Twenty-four-page magazine style booklet features photos of various installations of evaporators, filters, crystallizers and related equipment. Other sections are devoted to cranes, hoists, rotary shears, power hammers, stamping trimmers and barrel dumping devices. Booklet 236 available on request.

WHITING CORP., Dept. CEP, Harvey, Ill.

When inquiring specify CEP5927
— see information request blank, pgs. 2-3

For more information on product at right, specify CEP 5928
... see information request blank between pages 2-3.

When You Can't Buy 'em **BIG**—Buy 'em **GOOD!**

REALLY, it's no hardship when you have to buy smaller motors. *You save money.* But remember, when you can't buy 'em big—buy 'em good.

Now that you cannot depend on oversize to take your motors through tough service—you must depend on quality.

That is why you should investigate Fairbanks-Morse Motors with *Copperspun* Rotors.

The winding of the *Copperspun* Rotor is centrifugally cast of COPPER in one piece. It provides electrical and thermal characteristics that give this motor the stamina to stand up under the most severe service without mechanical failure. You can operate a Fairbanks-Morse Motor with *Copperspun* Rotor at its full rated capacity continuously and indefinitely without fear of damage from overloading.

Fairbanks, Morse & Co., 600 S. Michigan Ave., Chicago, Ill.

Copperspun

FAIRBANKS-MORSE



Motors

DIESEL ENGINES
PUMPS
ELECTRICAL MACHINERY
SCALES
MOTORS

WATER SYSTEMS
FARM EQUIPMENT
STOKERS
AIR CONDITIONERS
RAILROAD EQUIPMENT

CASH STANDARD *Streamlined* REDUCING VALVES

TYPE 1000
PRESSURE

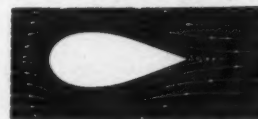
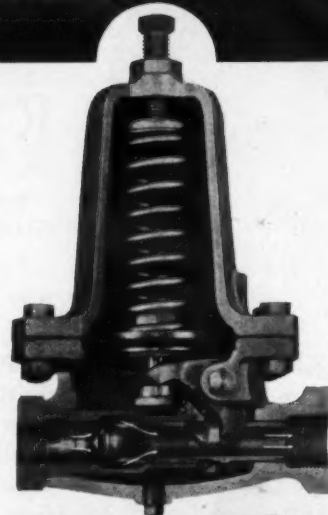
THEY'LL SEE YOU THROUGH
WITH *Non-Stop Production . . .*

● Smooth, speedy, non-stop production is a vital thing today. It's a great advantage to have the dependability of operation—the smooth, even flow of steam, air, or oil—the better pressure control and greater capacity obtainable with the "1000" Valve. The Streamlined flow pattern you see at the right pictures for you the kind of valve action you get that is an important factor in keeping things going on your production front. Years after they have been installed, "1000" Valves perform so that you continue to realize all of the twelve benefits listed below. The "1000" is known as the "NO TROUBLE" Valve.

POINTS THAT COUNT BIG IN YOUR FAVOR

You get all Twelve . . .

- | | |
|---|--|
| 1 Maximum Capacity when needed most | 7 Speedier Production Results |
| 2 Accurate Pressure Control under toughest working conditions | 8 Elimination of failures |
| 3 Trouble-free Service | 9 Constant Delivery Pressure |
| 4 Smooth Operation | 10 Cost Saving Operation |
| 5 Tight Closure | 11 No Spoilage |
| 6 Accurate Regulation | 12 Practically zero in maintenance costs |



HERE'S THE "1000" FLOW PATTERN
The Streamlined form of the inner valve eliminates turbulence. It produces the flow pattern shown above which makes for maximum capacity when it is needed most and permits accurate pressure control under toughest working conditions.



You can find out full details on all of the Type 1000 benefits by reading Bulletin "1000"—send for it!

**CASH STANDARD
CONTROLS..
VALVES**

A. W. CASH COMPANY
DECATUR, ILLINOIS

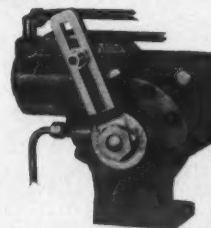
New CASH STANDARD Remote HYDRAULIC Control

Transmits oscillating motion without mechanical linkage



TYPE 550 SENDER

● Primarily used by aircraft manufacturers and aeronautical laboratories on engine test cells for controlling throttle position and mixture — this Type 550 Remote Hydraulic Control may fit your needs too. It is good for use where you desire to control apparatus remotely—without mechanical linkage. To operate, depress button in control lever with thumb. This releases the automatic brake. Move control lever to any desired position: release button, and control is automatically locked in that position, where it will remain indefinitely. The unit — A Type 550 Sender (above) and Type 550 Receiver (below), has positive hydraulic power in both directions — no springs, no cups on pistons. It transmits the total force applied to the control lever. There is no lost motion in either direction. The lever of the Receiver moves 90 degrees. It can be indexed to any position. For easy mounting, the bracket of the Receiver can be indexed to four positions. The Receiver can be installed above or below the Sender.



TYPE 550 RECEIVER

Write for Data

PRODUCTION

Synthetic Shellac

For use in floor wax, shoe polishes; coating for molded rubber goods

Uses — As a synthetic shellac replacement for use in bright drying floor waxes and shoe polishes. In rubber industry as coating for molded goods.

Description — Described as similar in appearance to refined shellac. When cut with alcohol in proportions of 2 to 2½ lbs. per gallon it leaves bright film which is hard, durable and moisture resistant. Complete information on cutting with ammonia and with borax and other data is available upon request.

BEACON CO., Dept. CEP, 97 Bickford St., Boston, Mass.

When inquiring specify CEP5929
— see information request blank, pgs. 2-3

Chemical Mixing Tanks and Proportioners

Four page, two-color-illustrated bulletin describes chemical tanks and proportioning equipment. Remote control proportioner, which makes it possible to locate the flow meter, which is a part of the proportioner at any point in the raw water supply lines is discussed in detail. Specifications for the various sizes of tanks are listed as well as those of disc, turbine and propeller type meters. Diagram of typical installation emphasizes practical features. Bulletin No. 312 available on request.

GRAVER TANK & MFG. CO., INC.
Dept. CEP, East Chicago, Ind.

When inquiring specify CEP5930
— see information request blank, pgs. 2-3

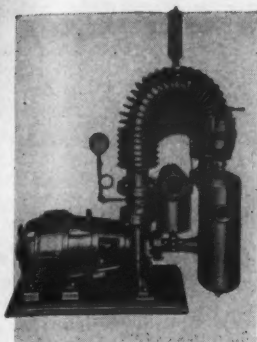
Semi-Automatic Starters

Semi-automatic resistance starters for manually starting polyphase squirrel cage motors are described in concise, detailed bulletin. These starters are well adapted for use with loads that must accelerate smoothly or where starting currents must be kept low to prevent flicker. Bulletin available upon request.

ALLEN-BRADLEY CO., Dept. 1311 St. First St., Milwaukee, Wis.

When inquiring specify CEP5931
— see information request blank, pgs. 2-3

For more information on product at left, specify CEP 5932
... see information request blank between pages 2-3.



A Condensate Return System That Improves Quality Increases Production Saves Fuel Cost

THE Cochrane-Becker High Pressure System of Condensate Return is a remarkable new system of draining condensate from process equipment and returning it, freed of entrained air and gases, to the boiler, at high pressure and close-to-process temperature.

The principle is that of an eductor, the action of which is energized by a jet pump and balanced by a loop that insures continuous positive priming. An air separator in the circuit automatically and continuously separates entrained air and gases, and the condensate is delivered to the boiler without flash loss anywhere along the closed circuit of the C-B system.

Savings in process work are amazing. Write for details and copy of Cochrane Publication No. 3025.

COCHRANE CORPORATION, 3147 NORTH 17TH ST., PHILA., PA.

Cochrane

When inquiring specify CEP5933 — see information request blank, pgs. 2-3

COMMERCIAL SHAPE BOOK

#

A booklet that C. E. P. reading engineers, purchasing agents and designers should have.

It lists the pressed steel shapes that we make and sell without the usual pressed steel die or tool charges.

These pieces are sold by the piece, if we have them in stock, or by carload, subject of course, to the usual war-time priorities, etc.

IF YOU HAVE NOT RECEIVED
A COPY — REQUEST ONE.

THE COMMERCIAL SHEARING AND STAMPING COMPANY.

YOUNGSTOWN OHIO U.S.A.

When inquiring specify CEP5934 — see information request blank, pgs. 2-3

JANUARY-FEBRUARY, 1943

PRODUCTION

Absorbent Form Lining Improves Concrete, Easily Applied, Removed

Water and air bubbles decreased; greater weather and abrasive resistance; flexible for curved surfaces

Uses — Absorbent lining designed for use on forms for concrete for all types of construction in which it is poured. Now being used on construction in many parts of the world.

Features — Linings easily applied to concrete forms by stapling. It is light, easily handled and flexible for curved surfaces. Absorbent properties of lining remove water and air bubbles from surface of concrete.

Performance — Samples of concrete were held within two inches of air blast delivering sharp steel grit at twenty pounds air pressure. Concrete cast against ordinary wood form — quarter inch deep hole dug in one minute. Concrete cast with special lining showed barely perceptible mark. Weathering test of repeated freezing and thawing showed even greater relatively superiority, as high as four to one.

Description — War shortage of materials played an important part in the development of lining in its now perfected form. Principle of its application was discovered in work concerning rubber materials which indicated that concrete cast against porous materials was superior because of the resulting removal of air bubbles and water. Cost of such porous materials prompted development of inexpensive cardboard lining with a rayon fabric applied to it by rubber latex cement. War successively stopped use of rayon, rubber latex, reclaimed rubber in dispersion but thoroughly satisfactory substitutes embodying no restricted materials were found. More than half a million square feet produced. Linings are easily applied to concrete forms by stapling. After concrete has been cast, forms are removed and lining is easily peeled from concrete leaving a surface that needs no brushing or other refinishing operation. Product named "Hydron."

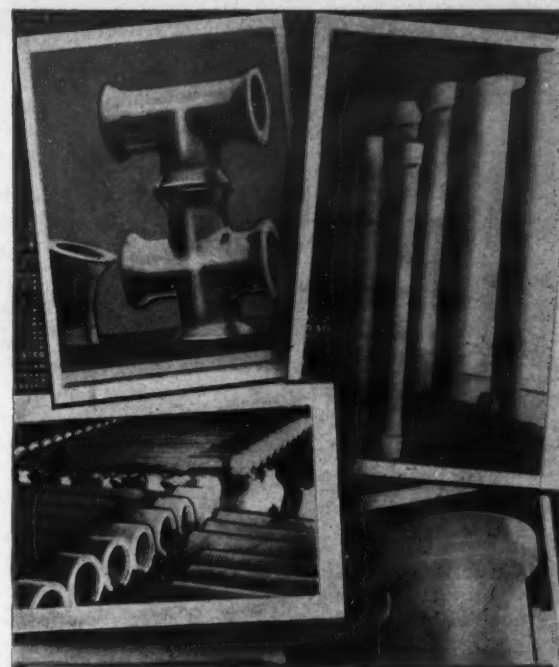
UNITED STATES RUBBER CO., Dept. CEP, Rockefeller Center, New York, N. Y.

When inquiring specify CEP5935 — see information request blank, pgs. 2-3



CONCRETE FORM LINING . . . peels off, leaving a good surface

For complete information regarding products described in this issue a handy request slip is provided between pages 2 and 3. Check the items that interest you, fill in name and address and send it to publishers. Information will come to you promptly.



KNIGHT-WARE

Acid-Proof PIPE for every purpose

Knight-Ware acid proof chemical pipe is being effectively used in a great variety of places where resistance to acids, alkalis, gases and fumes is vital.

The small bore, liquid carrying pipe is extensively used in chemical industries for carrying processing acids and waste liquids containing corrosive elements. Larger sizes of Knight-Ware pipe, used for carrying chemical vapors and gases are frequently tailor-made to fit an existing laboratory or industrial layout. Of timely interest is the fact that Knight-Ware bell and spigot piping requires no metal for the joints.

Knight-Ware piping is one of countless chemical stoneware items made for laboratories and industrial plants. Tell us your needs and our engineers will try to give you a practical solution.

MAURICE A. KNIGHT
401 Kelly Ave., Akron, Ohio

When inquiring specify CEP5936 — see information request blank, pgs. 2-3

MATERIALS

thoroughly and then filled into crack or cavity, tamped in and smoothed with wet finger. Let dry 6 to 12 hours. Sandpaper, then apply porcelain glaze (from Jar No. 2) with small brush. Repeat with several additional coats until surface is flush. The glaze may be sprayed if desired. Cement and porcelain glaze fuse together solidly. To join broken pieces clean as before, apply cement coating to either surface, press together. Observe same drying time. Cement can be thinned with glaze or thinner. *Description* — Basic formula is said to be that used in China. Sold in half pint, pint, quart and gallon sizes for convenience and economy of quantity users. They are sold separately in white or can be matched to any color on special order. Product is known as "Jo-lar Porcelain Renew."

JOHNSON PRODUCTS CO., Dept. CEP, 507 Fifth Ave., New York, N. Y.

When inquiring specify CEP5943 — see information request blank, pgs. 2-3

Cellulose Solutions for Adhesive Cements

Two-page-bulletin describes services of chemical organization in supplying cellulose solutions to plants directly engaged in war production. Solutions for use in waterproof, oil proof, heat proof and non-conductive adhesive cements and for permanent or temporary bonding of wood, leather, fibre, cloth, sheeting, glass, porcelain, plastics, metal and metal parts, are listed. Bulletin and additional information available on request.

CATARACT CHEMICAL CO., Dept. CEP, 94 Rapin Pl., Buffalo, N. Y.

When inquiring specify CEP5944 — see information request blank, pgs. 2-3

Synthetic Rubber Polymerization with Non-Ionic Emulsifiers

Commercially available ester, free from soap, said to offer interesting possibilities in this field

Uses — It is suggested that non-ionic emulsifiers should prove of great practical interest to workers in the manufacture of synthetic rubber by polymerization of butadiene, styrene, acrylonitrile or other unsaturated compounds in which recourse is had to emulsification in order to promote polymerization and speed up the reaction. Ordinary soap can serve as an emulsifier in this stage but different results are often obtainable by using different emulsifiers. Simple variations in the anion of the soap such as replacing sodium by potassium or ammonium, have produced marked effects. The non-ionic emulsifier referred to here and commercially obtainable is described as having numerous possibilities in this connection.

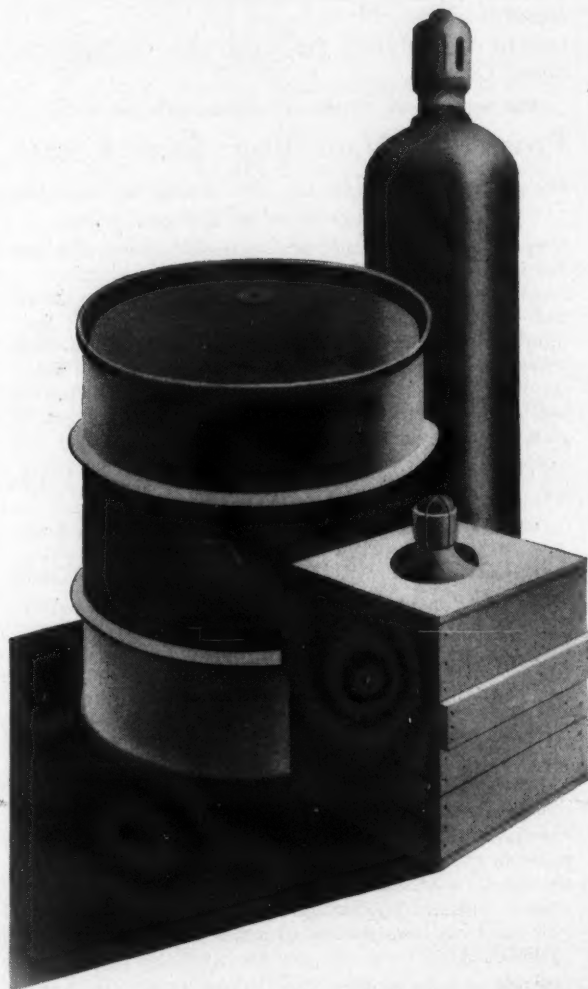
Description — This non-ionic emulsifier, together with others of a series of commercially available products are chemically the partial fatty acid esters of the polyhydric alcohols, exemplified by various glycol and glycerol oleates, sterates and ricinoleates. The one specifically referred to here is identified by manufacturer as S 541 free from soap and possessing interesting possibilities in polymerization of rubber. Polyhydric esters of this type, including S 541 may be tested through samples available on request.

GLYCO PRODUCTS CO., INC., Dept. CEP, 230 King St., Brooklyn, N. Y.

When inquiring specify CEP5945 — see information request blank, pgs. 2-3

CONTAINERS ARE VITAL

✓ handle carefully ✓ return promptly



CONTAINERS today are worth their weight in gold. Every drum, cylinder and carboy must do the work of three or four in peacetime.

YOU can help to keep essential chemical materials moving smoothly and quickly and assure speedier delivery of your next order by following these five simple steps:

1. Handle all containers with care.
2. Empty contents as soon as possible.
3. Don't use for other materials... don't even rinse drums and carboys with water.
4. Replace bungs in drums, outlet caps on cylinders, and thoroughly drain carboys.
5. THEN RUSH THEM BACK WHERE THEY CAME FROM!

Every user of chemicals who follows those five suggestions will be helping save materials...and time...two vital ingredients for victory! MONSANTO CHEMICAL COMPANY, St. Louis, Missouri and Everett Station, Boston, Massachusetts.



"E" FOR EXCELLENCE—The Army-Navy "E" burgee, "representing recognition by both the Army and the Navy of especially meritorious production of war materials," has been awarded to Monsanto and replaces the Navy "E" first awarded Monsanto December 31, 1941.



When inquiring specify CEP5946 . . . see information request blank, pgs. 2-3



Aktiv

FOR CLEANING CEMENT

TURCO AKTIV cleans and bleaches cement surfaces quickly and safely. It is non-inflammable and chemically mild, with no caustic or acid ingredients which might be injurious to shoes or clothing. Quickly prepared, dissolves in water, inexpensive, labor-saving, used by hospitals, garages, and restaurants which have large unpainted cement areas to clean, bleach and maintain.

TURCO manufactures more than 225 Specialized Industrial Chemical Compounds for every industry. Of these, a group has been developed and specialized to meet the problems of the laundry operator. Your local TURCO Service Specialist will gladly consult with you any time and prescribe the proper TURCO material for your problems. No obligation.

MAIL THIS COUPON.....

TURCO PRODUCTS, INC. 49-13
6135 South Central Avenue, Los Angeles
Please send free literature and information describing the new TURCO AKTIV.

NAME _____ TITLE _____
FIRM _____
ADDRESS _____ STATE _____

TURCO PRODUCTS, INC.

LOS ANGELES • SAN FRANCISCO • CHICAGO
HEAD OFFICE: 6135 So. Central Ave., Los Angeles
Sales and Service Representatives and Warehouse
Stocks in All Principal Cities

Factories in Los Angeles and Chicago

When inquiring specify CEP5947 — see information request blank, pgs. 2-3

MATERIALS

Asphalt Floor Laid on Wood Base

Designed for heavy duty service; non-skid, dust-free, resilient, easily applied.

Uses — For industrial plants requiring heavy duty flooring with capacity for service approximating that provided by steel or reinforced concrete.

Features — Low installation cost and maintenance. Non-skid, dustless surface. Laid over solid wood base.

Description — Easily applied. Designed to offer great resistance to wear and heavy moving loads of great intensity. Non-skid and resilient. Product is named, "Elastite Industrial Flooring." Samples and literature available on request.

PHILIP CAREY MFG. CO., Dept. CEP, Lockland, Cincinnati, Ohio.

When inquiring specify CEP5948 — see information request blank, pgs. 2-3

Protective Vanishing Skin Cream

For preventing industrial skin irritations and for quick and easy removal of dirt and grime

Uses — As an industrial protective skin cream that also provides for quick and easy removal of dirt and grime.

Description — Water soluble cream applied to hands and other exposed parts before starting work. Soft, snowy and fragrant. Vanishes quickly leaving an invisible protective coating. Washes off easily with soap and water, removing dirt and grime at the same time and leaving hands and finger nails clean. Attractively packaged in glass jars. Product is known as "MITTS."

MITTS MFG. CO., Dept. CEP, 367 East 45th St., Brooklyn, N. Y.

When inquiring specify CEP5949 — see information request blank, pgs. 2-3

Dehydrated Paint Offers Economies

Suitable for most interior surfaces; twelve colors

Uses — For practically all interior wall surfaces including plaster, brick, wall board, wallpaper, cement.

Features — Weighs about half as much as liquid paint and bulks considerably less which is advantageous in handling, shipping and storing. Washes easily.

Description — This new product has been designed to meet the demands for a completely dehydrated paint. In most instances one coat is said to provide the desired cover. Container problem eliminated. Cannot freeze. Paint now made in twelve standard colors and twelve additional colors can be made by mixing two or more of the standard ones as indicated on chart giving necessary directions. This new paint has been introduced under the descriptive name "DEHYDRAY."

DEVORE & RAYNOLDS, INC., Dept. CEP, 1 West 47th St., New York, N. Y.

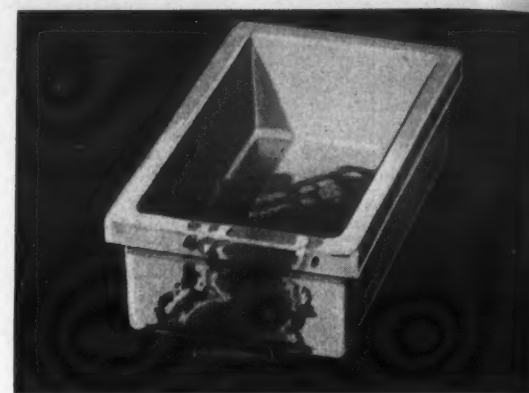
When inquiring specify CEP5950 — see information request blank, pgs. 2-3

Stabilized Degreasing Solvents

Two single page bulletins describe briefly and clearly features and applications of stabilized, chlorinated degreasing solvents for metal cleaning such as aluminum parts, die castings and combinations of metals which are known to cause breakdowns of some solvents. Non-explosive and non-inflammable properties are cited. Bulletins are available upon request.

DETROIT REX, Dept. CEP, 13005 Hillview Ave., Detroit, Mich.

When inquiring specify CEP5951 — see information request blank, pgs. 2-3



Unaffected by Acids or Alkalies

Permanent, uniform Colonial Porcelain offers many advantages for use in the chemical industries. It is unaffected by most acids, alkalies or fumes. Neither is it affected by rust, corrosion or weathering.

Colonial Porcelain molders are craftsmen. They can make nearly any shape to exact specifications. Send us samples or drawings for price estimates.



THE COLONIAL INSULATOR CO.

967 Grant St., Akron, Ohio

Chicago Office: 1706 Fullerton Ave.

When inquiring specify CEP5952 — see information request blank, pgs. 2-3



CORRECTS IMPERFECTIONS IN THREADS And Flange Faces

Positive expansion after setting does more than end leaks permanently. It smooths flange faces and corrects imperfect or burred threads. In these days when piping is hard to get, this exclusive X-Pando Pipe Compound feature means that you can repair pipe joints you would ordinarily be forced to throw out. Get to know X-Pando ask your local mill supply house. There's an X-Pando distributor near you.

X-PANDO Pipe Joint Compound

EXPANDS AS IT SETS. One formula for all uses. Goes 4 to 6 times further than ordinary compounds. Better than litharge and glycerin for all uses. Expands and contracts with pipe movement. Not affected by vibration, deflection, temperature, or pressures. The perfect sealing compound. Holds anything carried in metal pipe except some heavy acids. See Your Local Mill Supply House — Distributors Everywhere



X-PANDO CORPORATION

43-15 - 36th Street • Long Island City, N. Y. • STilwell 4-7180

Expand in Distributors. LA SALT PRODUCTS LTD. 139 W. 4th St. • Montreal, Quebec, Canada

When inquiring specify CEP5953 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

NEVILLE

Available NOW! Resins

*Neutral
*Waterproof
*Resistant to chemicals
*Pale or dark colors in 5-160°
*Melting Points

NEVINDENE*
NUBA*
PARADENE*
"R" RESINS
"G" RESIN
465 RESIN

*REG. U.S. PAT. OFF.

Most synthetic resins are now under W. P. B. allocations. However, Neville Coumarone-Indene Resins are not covered by such allocation regulations.*

*as this "ad" is written

THE NEVILLE COMPANY

PITTSBURGH • PA.

Chemicals for the Nation's War Effort

BENZOL • TOLUOL • XYLOL • TOLUOL SUBSTITUTES • CRUDE COAL-TAR SOLVENTS
HI-FLASH SOLVENTS • PAINT AND VARNISH REMOVERS • COUMARONE-INDENE RESINS
RUBBER COMPOUNDING MATERIALS • WIRE ENAMEL THINNERS • DIBUTYL PHTHALATE
TAR PAINTS • RECLAIMING, PLASTICIZING, NEUTRAL, CREOSOTE, SHINGLE STAIN OILS

When inquiring specify CEP5954 — see information request blank, pgs. 2-3

AMAZING SPEED!

QUICK-FLOOR

PATCHES — REPAIRS — COVERS
CONCRETE FLOORS
in the midst of traffic

BEFORE QUICK-FLOOR

ONE MINUTE LATER

IN ONE MINUTE!

JUST PLACE, PACK AND USE IMMEDIATELY!

NO TRAFFIC INTERRUPTION

Truck wheels set it

NO WAITING OR DRYING TIME

Ready for instant use

NO CUTTING AWAY

Patch any hole "as is"

NO MIXING

Use direct from drum

LASTS FOR YEARS

Write for circular and prices

HOW GOOD IS QUICK-FLOOR?
These firms repeat regularly:
Republic Steel Corp.
Anchor Hocking Glass Co.
Inland Steel Co.
Hornishegger Corp.
Pittsburgh Plate Glass Co.
Robert Gair Co.
Appleton Electric Co.
and many more

DURA-TRED COMPANY

3512 CARROLL AVENUE

PHONE VAN BUREN 2171

CHICAGO, ILLINOIS

When inquiring specify CEP5955 — see information request blank, pgs. 2-3

MATERIALS

Textile Finish Uses No Tallow Saves Glycerine for War Needs

Derived from petroleum; compares favorably with sulphonated tallow-base finishes

Uses — For finishing textile fabrics and replacing tallow widely used for such purposes.

Features — Designed to achieve same effect as sulphonated tallow, which has been used in large quantities to impart a pleasing finish to fabrics, and thus conserve sources of glycerine vitally needed in war production.

Description — This new finish is derived from petroleum. For textile purposes 100 pounds of this material replaces about 140 pounds of tallow from which some 10 pounds of glycerine may be recovered. Cost of this product is said to compare favorably with sulphonated tallow on which orthodox finishes are based. Finish is identified as "Avitone A."

E. I. du PONT de NEMOURS & CO., Dept. CEP, Wilmington, Del.

When inquiring specify CEP5956 — see information request blank, pgs. 2-3

Corrosion-Resistant Synthetic Materials

Sixteen-page-two-color-illustrated booklet, 8½ x 11 traces the development and describes various steps in the production of synthetic materials resembling rubber in many physical characteristics, yet entirely different in chemical structure. Corrosion-resistant properties and wide range of adaptability are emphasized. These materials are described technically as a series of halide polymers, new condensation resins and diene derivatives compounded to various formulae to produce materials with a great variety of physical properties. Among a large number of applications described and pictured are sheeting, impregnating fabric such as hose, gloves, belting, transparent, easily removed protective coatings, small molded parts, fittings, tubing, tank lining, rolls, electrical insulation. Chemical resistance of one of the formulations as contrasted with two basic plastics presents data determined in accordance with official recommendations. Material is known as "Tygon." Booklet 1620 available upon request.

UNITED STATES STONEWARE CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP5957 — see information request blank, pgs. 2-3

Data Books on Koroseal

Data on Koroseal covering its chemistry, physical properties, stabilization, pigmentation, vulcanizing, mixing procedures, processing and uses are given in the first of three handbooks. The development of Koroseal, defined as a group of plasticized vinyl resins, is interestingly traced as well as the methods and sequence of its manufacture. Six charts are of great interest: a manufacturing flow diagram, specific viscosity vs. physical properties, effect of quantity of plasticizer, electrical effects of aging, difference in plasticizers and physical effects of various pigments. Also two tables, one on physical constants and the other on plasticizer comparison. Section 2 covers insulating and jacketing materials for wires and cables while section 3 describes laboratory tests evaluating thermoplastic and thermosetting materials. Available upon request.

B. F. GOODRICH & CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP5958 — see information request blank, pgs. 2-3

ASK US FOR PROOF

that Eagle Super "66" Plastic Insulation
will reduce your heat losses and costs ...
conserve precious fuel for Uncle Sam's War!



FREE! These Data-Packed Specification Pages will give you the full story of a unique and outstanding insulating material — Eagle Super "66" Plastic Insulation — which is suitable for practically any heated equipment operated at temperatures up to 1800° F.

Springy, resilient balls of Eagle High Temperature Mineral Wool — honey-combed by thousands of "dead air" cells to provide exceptionally high heat saving efficiency — are the basic ingredient.

Maximum dry coverage is provided because Eagle Super "66" has unusually low volumetric shrinkage. Count on an average wet coverage of 61 square feet one inch thick per 100 lbs., and a dry coverage from 50 to 55 square feet.

100% reclaimable when used at temperatures up to 1200° F., Eagle Super "66" may be removed from equipment, remixed with water, reused.

Actively rust-inhibitive — when properly applied to iron or steel surfaces, Eagle Super "66" effectively checks rust and corrosion in addition to its other properties.

Send us your request for data sheets today!



The EAGLE-PICHER LEAD COMPANY

Cincinnati, Ohio

Eagle-Picher High Temperature Insulating Materials also include Eagle Insulating Blankets, Eagle Supertemp Blocks, Eagle Loose Wool, Eagle Insulheat, Eagle Insul-stic, Eagle Finishing Cements.

When inquiring specify CEP5959 — see information request blank, pgs. 2-3



No More Damage from Condensation or Sweating Pipes, Tanks, Walls, Ceilings and Air Ducts.



NoDrip A SURE CURE

• This sensational plastic cork coating prevents condensation drip from metal, concrete, brick, wood, plaster or composition. Permanently protects metal against rust and corrosion, thus prolonging life of pipes, tanks, etc. Forms a moisture-proof, insulation type coating impervious to acid and alkali.

Stucco-like finish requires no maintenance and can be painted any color. A gallon covers about 30 feet of 1" O. D. pipe. Comes in 1, 5 and 55 gallon drums.

Immediate Shipment. Order from your Supply House.
Write for NoDrip Handbook.

J. W. MORTELL CO.
Technical Coatings Since 1895

530 BURCH ST.

KANKAKEE, ILLINOIS

When inquiring specify CEP5000 — see information request blank, pgs. 2-3

FUEL COST REDUCED 10% with WYO-LITE PLASTIC INSULATION



The illustration shows a sheet treating normalizer in a large rolling mill. WYO-LITE Plastic Insulation was applied 3" thick on 100 ft. of roof. Accurate meter readings were made before and after applying WYO-LITE and showed that 10% less gas was used. Many large Steel Companies have standardized on WYO-LITE Plastic Insulation and use it exclusively on many types of equipment. It is far more economical than other types of insulation because ONE TON COVERS 1,500 SQ. FT., 1" THICK. It contains no fibers and can be applied by your own workmen without injuring hands. For years it has been successfully used on all types of furnaces, boilers, ovens, dryers, fittings, hot water tanks, etc., etc.

Write for Details and Prices

WYO-LITE INSULATING PRODUCTS
4613 East 71st St., Cleveland, Ohio

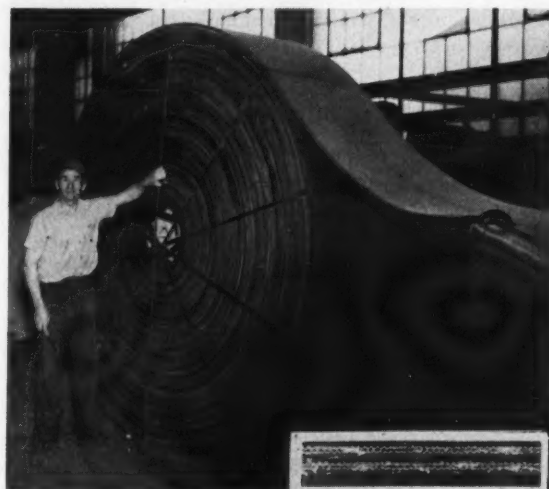
1 Ton of Wyo-Lite Covers 1500 SQ. FT.

When inquiring specify CEP5061 — see information request blank, pgs. 2-3

Equipment for Production

Single Conveyor Belt With Steel Cable Carcass Lifts Ore 240 Ft.

Double strength of fabrics; transfer from belt to belt avoided; maximum troughing without injury



IRON MINE CONVEYOR BELT . . . uses steel cables in carcass instead of cords

Uses — The use of the belt described here to lift ore at mine 240 feet in a 1100 foot conveyor indicate its strength, capacity and the adaptability of this type to other material handling requirements.

Features — Steel cables are used in places of the customary cords or fabric. Obviates the several transfers from individual belts necessary in such operations when conventional belts are used. No thicker than a conveyor belt with, for example six plies of fabric, new belt's strength is actually the equivalent of 14 such plies.

Description — Steel cable carcasses were adapted by the manufacturer from a previous development of the organization, - use of steel cable carcasses in flat transmission and V-belts. Company engineers assert that these conveyor belts, such as that used in the mine referred to, permit a maximum of troughing without injury to the belt, making possible the carrying of heavier loads without the spilling of the load over the sides. Carcass of each steel cable belt consists of parallel steel cables, each cable containing a multiplicity of closely-laid-thin strands. Steel carcass belts look like other belts as the rubber surface is applied in same manner as on cotton cords or fabrics.

GOODYEAR TIRE & RUBBER CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP5962 — see information request blank, pgs. 2-3

Chemical Resistant Plastic Pipe Hot Plate Welded in One Minute

Handles acids, alkalis, oil, water; replacement for metal, rubber; pipes, fittings also available

Uses — Especially suitable for applications where chemical resistance is essential. Adaptable to a great variety of industrial uses. In a number of installations it replaces metal

or rubber. For handling alkalis, solvents, oil, gas, water. **Features** — Can be fabricated into a great variety of forms. Can be readily welded, heated or bent and is threaded with standard piping and plumbing equipment. Two pieces joined by hot plate welding in one minute.

Description — Pipe (and also tubing and fittings) made of chemically resistant thermoplastic resin. At present pipe sizes range from 1/2 in. to 2 in. IPS. Larger sizes to be available. Weight of this pipe 1/4 comparable sizes of iron pipe. In hot plate welding initial set allows complete freedom of handling but full strength in the joint is developed within 24 hours. This permits crystallization of the material to take place and make the joint strength greater than the pipe itself. Final joints of pipe can be welded into position after erection. In threading lubricant is desirable but not absolutely essential. Operation exactly parallels cutting of standard pipe threads on metallic pipe. Among the many reagents included in tests for chemical resistance are 98% (conc) H₂SO₄ — good, 60% H₂SO₄ — excellent, Ethyl Acetate — excellent. Lubricating and linseed oil — excellent. Carbon Tetrachloride — Good — Acetone and Benzene — Fair.

Performance — Resistance to heat (intermittent) 212° F. continuous 170° F. Softening point 240-280° F. Specific Gravity 1.68-1.75 Tensile strength 4000-8000 lbs. PSI. Transparent to opaque. Extensive Color possibilities. Good machining qualities. Effect of age — none. Water absorption less than 1%.

DOW CHEMICAL CO., Dept. CEP, Midland, Mich.

When inquiring specify CEP5963 — see information request blank, pgs. 2-3



PLASTIC PIPE . . . heated on hot plate to 350-400 deg. F. until molten material inventory appears



HEATED PIPE ENDS then joined in proper position by pressing, forming strong joint

CHEMICAL EQUIPMENT PREVIEW

PRODUCTION

All Plastic Unbreakable, Flameproof Face & Eye Shield Weighs Only 3 Oz.

*Protects against sparks, flying particles and splashing; easily adjusted for men — women.
Can be worn over glasses and respirators*



PLASTIC FACE SHIELD . . . raised and lowered by pull-up strap

Widely adapted to many industries. Already in use in motor, aircraft, electrical, chemical, building material, tool and machinery plants.

Features — Full-face protection with all-round ventilation and vision. Non-interference with wearing of prescription glasses. Positive lifting and adjusting devices. For example, pull strap lifts shield. Necessity for touching it or face with hand eliminated. Can be worn over respirator.

Description — Made of clear, non-flammable acetate plastic. Highly transparent and non-glare characteristics. Sweat-band holder and very light weight contribute to wearer's comfort. Unbreakable and easily cleaned with damp cloth. Size 10 x 10 inches. Weight 3 ounces. Approved by Underwriters' Laboratories.

WESTERN RESERVE LABORATORIES, Dept. CEP, 26 Climax Bldg., Cleveland, Ohio.

When inquiring specify CEP5984 — see information request blank, pgs. 2-3

Pneumatic Drill Weighs Only 2 Lbs.

Sturdy construction for prolonged use; built-in speed regulator and automatic oiler



Uses — Designed to meet requirements for a lightweight pneumatic drill. Now being used in various war production jobs, including aircraft.

Features — Weighs less than two pounds. Fits the hand pistol grip. Well suited to women operators. **Description** — Powered by a "multi-vane" air motor. Built-in speed regulator can be set for desired performance. Split second throttle action permits quick, accurate hole starting. Lubrication by built-in automatic oiler. Identified as the Number 00a Drill. Complete information on request.

INGERSOLL-RAND CO., Dept. CEP, 11 Broadway, New York, N. Y.

When inquiring specify CEP5985 — see information request blank, pgs. 2-3

YOUR PRODUCTION
DRIVE STARTS WITH
YOUR EQUIPMENT

Increase yield

BY STEPPING UP PRESSURES



In many processes, such as the manufacture of glutamic acids, increased pressure increases yield. In other cases, higher pressures have meant the difference between satisfactory and unacceptable quality.

Today, Pfaudler glass-lined steel reaction equipment is operating at higher pressure ranges than ever before. The limiting factor is not the glass fused into steel—it is the ability of gaskets to hold pressure. This problem has received constant study and marked improvement has been achieved.

For example, standardized reaction kettles in capacities of 2,000

gallons and larger are built for 125 pounds per square inch internal pressure. Smaller equipment, particularly autoclaves, have been built to withstand 1,000 pounds per square inch internal pressure.

Remarkable diversity of operation can be carried on with standardized Pfaudler equipment. Wherever possible, this should be specified, since better deliveries can be made. However, where special designs are required, we urge you to begin negotiations well in advance. Make sure you have our latest catalog before you make your next move.

PFAUDLER

The Pfaudler Co., Rochester, N. Y. Branch Offices: 330 West 42nd Street, New York City; 1442 Conway Bldg., Chicago, Ill.; 1325 Howard St., San Francisco, Calif.; 455 Paul Brown Bldg., St. Louis, Mo.; 751 Little Bldg., Boston, Mass.; 7310 Woodward Avenue, Detroit, Mich.; 1316 1st National Bank Bldg., Cincinnati, Ohio; 1228 Commercial Trs. Bldg., Philadelphia, Pa.

Glass-lined polymers used in the manufacture of synthetic rubber. These units are tested at 150 lbs. pressure and operate at 100 lbs. working pressure.



PFAUDLER GLASS-LINED STEEL IS RESISTANT TO ALL ACIDS (EXCEPT HF) IN ANY CONCENTRATION OR AT ANY TEMPERATURE

When inquiring specify CEP5966 . . . see information request blank, pgs. 2-3

Sweep up OIL

and GREASE

THIS EASY *Safe* WAY!

**ELIMINATE
FIRE HAZARDS**

**Carey
GREASE BALL**

ASBESTOS SWEEPING COMPOUND

Classified as "Non-Combustible"
by Underwriters' Laboratories, Inc.

Here at last — a sweeping compound that efficiently removes oil and grease deposits, yet does not create a fire hazard. Absorptive action; mildly abrasive. The **ONLY** product of the kind on current Underwriters' re-examination list classified as "Non-Combustible."

LESSENS ACCIDENTS DUE TO FALLS

Widely used in metal working, chemical and food plants, refineries, power plants, garages, filling stations, etc. Contains no acids or caustics; will not damage floors or injure shoes or clothing.

Very economical — may be reused until thoroughly oil soaked. Write for free sample and full information to Dept. 89.

NON-SKID
Removes danger of accidents and possible law suits.

HARMLESS
Contains no acids or caustics. Will not damage floors or shoes.

ECONOMICAL
Inexpensive; reduces cleaning costs. Available in 50 lb. bags.

THE PHILIP CAREY MFG. COMPANY • Lockland, Cincinnati, Ohio
Dependable Products Since 1873

When inquiring specify CEP5907 — see information request blank, pgs. 2-3

PRODUCTION

Respirator Has Twin-Plastic Cases for Single Throw-Away Filters

New design saves metal, provides better vision
U. S. Bureau of Mines approved

Uses — This respirator has been re-designed to employ filter cases of black plastic to save metal. It uses single inexpensive throw away filters and is available in various types to meet various dust and mist conditions. For protection against pneumoconiosis-producing or nuisance dusts, whether dry or supported in a water mist and toxic dusts such as lead, arsenic and cadmium.

Features — The new thinner container units with rounded edges permit better sidewise and downward vision, have high impact strength and no electrical conductivity. Are not effected by perspiration. Low breathing resistance. Inhalation valves prevent wet filters.

Description — Respirator has twin side-placed filters of large area. All parts are easily replaceable and except for the filter can be washed and sterilized. Inexpensive single throw away filters permit simple replacement with fresh filters each time respirator is cleaned. Plastic filter lids easily unscrewed and replaced. Single filters supplant two part felt and cellulose filter used previously and are interchangeable in either the new plastic or metal models. Approved by U. S. Bureau of Mines.

dock, Thomas & Meade Sts., Pittsburgh, Pa.
MINE SAFETY APPLIANCES CO., Dept. CEP, Brad-

When inquiring specify CEP5908 — see information request blank, pgs. 2-3

Rotary Pump With Revolvable Type Casing for Viscous Liquids

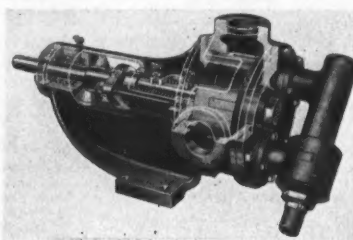
*Complete selection of ports, extra long stuffing box;
wide range of sizes*

Uses — These rotary pumps are designed for heavy duty service in handling heavy viscous liquids and for operation under unbalanced pressure conditions and varying loads.

Features — The bracket base includes an extra long stuffing box which

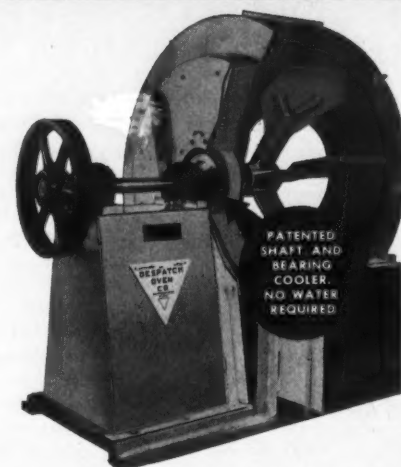


PLASTIC FILTER CASES . . conserve metal, no electrical conductivity



ROTARY PUMP . . for viscous liquids

NEW 1600°F. FANS



Despatch announces a complete line of all welded heavy duty HIGH TEMPERATURE FANS having capacities ranging from 1000 to 20,000 C. F. M. These fans have been thoroughly tested on Despatch high temperature recirculating furnaces over seven years. They are now offered to the trade for the first time.

Choose a Despatch fan for your next high temperature, acid resistant fan requirement. Note the improved performance and the long trouble-free service it will provide.

Write for design and construction details, prices and performance data.

DESPATCH OVEN
COMPANY
MINNEAPOLIS MINNESOTA

When inquiring specify CEP5909 — see information request blank, pgs. 2-3



We've Spilled the WORKS!

All the works—two discs and two wedges—only **four parts**—the entire working part assembly of a Darling Double Disc Gate Valve. Any part can be replaced quickly and inexpensively without removing the valve from the line.



Darling Gate Valves come in Fully Revolving Parallel Seat Double Disc, also in Taper Seat—Slotted and Solid Wedge types. In service pressures up to 3000 pounds they are available in Cast Iron, Bronze, Forged Steel, Cast Steel and Corrosion Resistant Alloys.

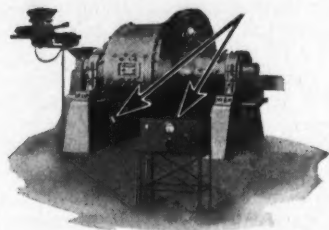
Wire or Write for Full Information.

DARLING VALVE & MANUFACTURING CO.
WILLIAMSPORT, PA.

When inquiring specify CEP5970 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

INCREASE YOUR MILL CAPACITY WITH THE "ELECTRIC EAR" SOUND CONTROL



Experience has proven that the installation of the "Electric Ear" controlling the feed to Ball, Pebble, Tube or Rod Mills result in a 10 to 20% increase in mill capacity.

Bulletin 42

HARDINGE
COMPANY, INCORPORATED - YORK, PENNSYLVANIA
NEW YORK, CHICAGO, SAN FRANCISCO, TORONTO

When inquiring specify CEP5071 — see information request blank, pgs. 2-3

ACME SilverStitchers CONSERVE MAN HOURS - AID WAR EFFORT



Box stitching is faster and easier in many war products plants . . . with Acme Silverstitchers. This speedy equipment is conserving man-hours and woman-hours, too, as many plants are now using women employees for this important work. With Acme Silverstitchers, one manufacturer realized material and labor savings of approximately 30%.

Acme Silverstitchers are easy to operate . . . sturdily built for constant and tough use . . . are made in all standard and many special types.

WIRE AND EQUIPMENT FORM WINNING COMBINATION

Engineered to function as a unit, Acme Silverstitchers and Acme Silverstitch assure faster and better stapling . . . lower carton stitching costs. Both wire and equipment are supplied and guaranteed by Acme Steel Company. Write today for full details.

ACME STEEL COMPANY

2808 Archer Avenue, Chicago, Illinois
BRANCHES AND SALES OFFICES IN PRINCIPAL CITIES

When inquiring specify CEP5072 — see information request blank, pgs. 2-3

JANUARY-FEBRUARY, 1943

PRODUCTION

provides protection against leaks at this one and only outside bearing. Double supported valve on head is designed to prevent noise and chattering. No outside by-pass need be used with this valve. The discharge line from the pump can be closed without stopping the unit.

Description — Pump casing is of the revolvable type which allows complete selection of the ports. The casing can be turned in the bracket from any 45 to 90 degree angle from that shown in the illustration. This makes for a neat, more simplified and leak-proof installation regardless of the mounting conditions. Pump is equipped with an integral positive sealed thrust bearing which makes the entire unit very rigid and contributes to efficiency in handling adverse pumping applications. Available in 10, 18, 25, 50, 90, 200 and 300 gallon per minute sizes. Numerous mounting styles including back geared, V-belt drive, direct connected and double back geared. Pumps can also be equipped with steam jacketed back flanges and heads if it is necessary to heat the liquids to prepare them for pumping. Data bulletin 2500 — 40 is available upon request.

VIKING PUMP CO., Dept. CEP, Cedar Falls, Iowa.

When inquiring specify CEP5073 — see information request blank, pgs. 2-3

Fluorescent Fixtures Designed To Give Positive, Instant Starting

*Available in types for all applications; in
continuous or separate units*

Uses — These fluorescent lighting fixtures are designed especially to meet the requirements of various industrial plant applications including shop, offices, drafting rooms and similar locations.

Features — The outstanding feature of these fixtures is the employment of a new method of ballasting designed to give positive, instantaneous starting so that the lamp comes



FLUORESCENT FIXTURES . . . use new ballasting
for quick, positive starting

on fully at the turn of the switch just as in the case of incandescent lighting. The conventional starting device is done away with in these new fixtures to provide the advantages described. Other features specified are positive starting at lower atmospheric temperatures and lower voltage, no radio interference and satisfactory tube life.

Description — Available in all types for all applications, continuous or separate units, in close to ceiling or suspended mounting, open reflector or louvered models.

R. & W. WILEY INC., Dept. CEP, 777 Hertel Ave., Buffalo, N. Y.

When inquiring specify CEP5074 — see information request blank, pgs. 2-3

Amazing New Labels Applied Without Moistening Speed War Work!



MAGIC KUM-KLEEN LABELS...
Easily Peeled Off Without Leaving a Trace
Never Pop Off
Adhere to Any Smooth Surface Including
Plastics, Metal, Glass, Wood,
Varnish, Lacquer
Applied Without Moistening

America's mightiest War plants have found hundreds of ways to speed production, increase efficiency with amazing Kum-Kleen Labels. They are available in various shapes and sizes, printed or plain. There are no other labels like them! Write today for samples and catalog.

1045
P. D. OVER
NO.
REJECTED
OK TO ASSEMBLE
BAND DIAMETER
DEFECTIVE
THE N. Y. TRANSFORMER CO.
BENDIX INSPECTION DEPT.
SIGNAL CORPS
U. S. A.
CORD CD-508
Order No. 215-WFSCPD-42
Bulwerst Microphone Co., Ltd.
SALINITY INDICATOR
RELAY SETTINGS
LAY OUT
REPAIR
DO NOT REPAIR
Kum-Kleen STICKERS
Avery Adhesives, Dept. CE-1 451 East Third St. • Los Angeles, Calif.

When inquiring specify CEP5075 — see information request blank, pgs. 2-3

TODAY . . . when even
Seconds "out of service"
count as never before—more
and more manufacturers are
installing ASCO Valves for
performance—*plus!*



Type P32X

a typical case . . .

In combustion control systems as accurate, sensitive, coordinated and complete as those manufactured by the Bailey Meter Company of Cleveland, Ohio, nothing can be—nothing is left to chance.

The three-way solenoid valves used in Bailey Air-Operated Combustion Control, for example, are but a single component of a complete system—yet their engineers tested many valves first—and then standardized on Asco Valves.

If you . . .

have a perplexing problem involving the automatic or remote control of steam, air, liquids, or gases, tell us what you wish to accomplish. There are more than fifty types of solenoid valves in the complete line of Asco Valves . . . one of them will meet your requirements. Write for Catalog 147.

Automatic Switch Co.
47 EAST 11th STREET, NEW YORK, N. Y.

TELL US WHAT YOU WISH TO ACCOMPLISH

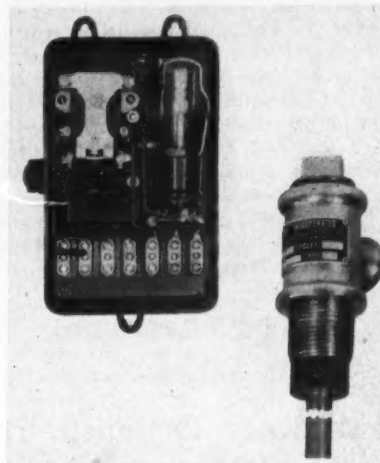
1-AS-1

When inquiring specify CEP5970 — see information request blank, pgs. 2-3

★ INSTRUMENTS of CONTROL

Electronic Water Detector Lock

Indicates water seepage in gasoline storage tanks, also available in battery operated type



CONTROL STOPS PUMPS, warns of water seepage in gasoline tank

Uses — This electronic water detector lock is designed to indicate water seepage in gasoline storage tanks.

Description — Probe fitting is mounted in a standard pipe fitting on the top surface of the tank, the probe rod projecting down through the tank to the level at which water seepage is to be detected — usually three inches

from the bottom of the tank. The detector lock is located at any point remote from the tank and wired to the probe. While the probe rod is entirely immersed in gasoline and as long as water seepage has not reached the probe, no signal is given. When water seepage rises to contact the probe tip, an electric circuit is completed through the water itself, and the water detector lock operates, turning off pumping equipment and actuating the alarm circuit. The detector lock referred to here, No. P15NH, is supplied in a weather-proof pressed steel housing, finished in green crystal. Operates on 115 or 230 volts AC. Explosion proof housings are also available. Probe fitting, type H31 available in brass, stainless steel and other metals. These water detector locks will handle output loads up to 10 amperes at 115 volts AC. Battery operated lock also available as standard.

PHOTOSWITCH, INC., Dept. CEP, 21 Chestnut St., Cambridge, Mass.

When inquiring specify CEP5977 — see information request blank, pgs. 2-3

Sub-Zero Test Cabinets to —115 F.

Made to individual specifications for instrument testing, rivet cooling, chemical storage

Uses — For aging of metal and other products requiring low temperatures of minus 115 degrees F. For oil testing, chemical storage, rivet cooling, for instrument testing, for plastics.

Features — Cabinets built for specific requirement for any product.

Description — Size, temperature limit and other specifications according to individual. Complete information is available upon request.

KING REFRIGERATION CO., Dept. CEP, 1011 Jefferson Ave., Toledo, Ohio

When inquiring specify CEP5978 — see information request blank, pgs. 2-3

Substitutes for Prohibited Thermocouple Material

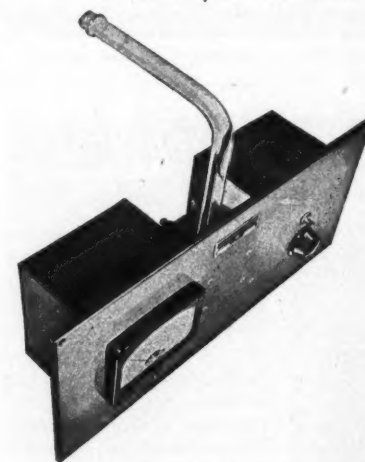
Six-page-bulletin, interpreting recently amended WPB Conservation Order L-134 as it applies to the use of thermocouples and thermocouple protecting tubes for pyrometric instruments, serves as a supplement to a thermocouple data book (No. S-2-3) previously issued by this organization. The bulletin gives recommendations for thermocouples and tubes that will serve in place of materials prohibited by the recent order. Convenient chart gives partial summary of the WPB order and an analysis of various alloys showing materials prohibited or restricted. Complete text of the order is also given. Together with the bulletin it supplements it provides listing of thermocouples by materials rather than by trade names, recommendations on lead wire, protecting tubes, plugs and sockets, thermocouple checking, millivolt conversion tables. Available upon request.

WHEELCO INSTRUMENTS CO., Dept. CEP, 841 West Harrison St., Chicago, Ill.

When inquiring specify CEP5979 — see information request blank, pgs. 2-3

Continuous-Flow Colorimeter

Uses tube for passage of liquid; continuous registration of concentration, turbidity



COLORIMETER . . . for permanent installation with chemical apparatus for continuous registration

Uses — A colorimeter for immediate direct indication of the light transmission of a liquid flowing through the instrument. Suited for continuous registration of concentration, color or turbidity of solutions in chemical processes.

Features — Liquid under test passes through a glass tube rather than being contained in an absorption cell or

test tube. Calibrated by solution of known concentration, the concentration is then indicated directly and continuously by the instrument, eliminating sample analysis at regular intervals.

Operation — Similar to usual colorimeters. Method depends largely on purpose to be accomplished. If the solution follows Beer's law the density readings obtained in actual operation are directly proportionate to concentration. Here it will be found convenient to mark calibration on dial fastened to window of instrument so that direct concentration readings are obtained. In some cases it may be necessary to check continuously on color, turbidity and hold within given permissible limits. These limits can be marked on window of instrument.

Description — Designed for mounting on control board. Panel carries indicating instrument, off-and-on switch for lamp, control knob for purpose of standardizing. Light

CHEMICAL EQUIPMENT PREVIEW

... PRODUCTION and LABORATORY

of 50 watt incandescent is collimated by condensing lens system. Cracklefinish steel case protects lamp, filter, photocell and related parts. Circuit comprising photocell and indicating instrument designed to give linear response. Instrument has ample sensitivity for the use of highly selective color filters isolating narrow spectral bands. Constant voltage transformer included. Identified as "Lumetron Continuous Flow Colorimeter Model 400-S." For 105-125 v., 50-60 c. AC. (transmission range of filter to be specified.) Descriptive Bulletin on request.

PHOTOVOLT CORP., Dept. CEP, 95 Madison Ave., New York, N. Y.

When inquiring specify CEP5980 — see information request blank, pgs. 2-3

Balance Type Pyrometers for Measurement and Control of Thermocouple Temperatures

Fifty-six page instrument catalog illustrates and describes thermocouple pyrometers for measurement and control. This edition is an extensive revision of that issued in 1939 and which was widely distributed. It does not differ widely from 1941 issue except for minor detail. It presents in most convenient form and with numerous photos complete and practical data on indicators, recorders and controllers. Advantages of the balance method are emphasized. The added material includes descriptions of automatically balanced indicators and non-indicating controllers for flush mountings. The section on thermocouples has been expanded. Catalog N-33 A available upon request.

LEEDS & NORTHRUP CO., Dept. CEP, 4934 Stenton Ave., Philadelphia, Pa.

When inquiring specify CEP5981 — see information request blank, pgs. 2-3

PRODUCT SPECIFICATIONS
A Wide Variety of Product Specifications Include Tests in the
NATIONAL MODEL X-1-A
TRADE-MARK
Accelerated WEATHERING UNIT

FABRICS

HOSE

COLORS

ENAMELS

DUCK

CANVAS

TAPE

LACQUER

PAINT

RUBBER

● The diversity of products for which the X-1-A has been designated as a specification test is proof of the qualities of this unit. This accelerated test has consistently predicted the durability of products under actual service conditions. It is rapid in action, economical to operate, has large test panel capacity, is available 24 hours a day, and is unaffected by weather, season or locality. The test cycle combines exposure to the weathering action of light, water, air, and thermal shock.

Procurement on priority rating in accordance with regulations in effect at time order is placed. Write for descriptive bulletin L-6400.

NATIONAL CARBON COMPANY, INC.
Unit of Union Carbide and Carbon Corporation

CARBON SALES DIVISION, CLEVELAND, OHIO
General Offices: 30 East 42nd St., New York, N. Y.
Branch Sales Offices: New York — Pittsburgh — Chicago — St. Louis — San Francisco

When inquiring specify CEP5982 — see information request blank, pgs. 2-3

Apparatus for Testing Asphalt, Bituminous Materials, Fuels and Lubricants

Ninety-six-page catalog, 8½ x 11 in. presents detailed information on apparatus for standard methods of testing asphalt bituminous materials, automotive and aviation fuels and lubricants conforming to specifications of the American Society for Testing Materials. Federal Specifications Board and other governing bodies. Also included are many laboratory utilities and in addition an up-to-date compilation of data on thermometers used for petroleum inspection. Catalog available upon request.

PRECISION SCIENTIFIC CO., Dept. CEP, 1736 North Springfield Ave., Chicago, Ill.

When inquiring specify CEP5983 — see information request blank, pgs. 2-3

Precision Control in Industrial Processes

64-page-booklet, 8½ x 11, describes and illustrates in careful detail a wide variety of applications of automatic controls to industrial processes. Included in chapter and section headings are "Storage Capacity," "Process Time Lags," "Importance of Rate," "Proportioning Control," "Floating Control," "Control Valves." Many typical applications cited featuring data and detailed drawings. Booklet No. 80-1 available upon request.

BROWN INSTRUMENT CO., Dept. CEP, Wayne & Roberts Aves. Philadelphia, Pa.

When inquiring specify CEP5984 — see information request blank, pgs. 2-3

CONSTANT TEMPERATURE ±0.02 F From 0 to 210 F For Kinematic Viscosity Measurements

Any selected operating temperature is uniformly maintained within ±0.02 F throughout the entire bath area. An inner glass jar contains the bath medium, and an outer glass jar creates an air jacket to prevent excessive heat loss when operating at high temperatures. The bath cover has individual positions for six pipettes which can be observed through the walls of the bath while they are immersed.

S-83255 SARGENT HIGH PRECISION CONSTANT TEMPERATURE VISCOSITY BATH ±0.02 F, PATENT No. 2,037,993. For operation from 115 volt A.C. 60 cycle single phase circuits. \$175.00

E. H. SARGENT & COMPANY, 155-165 East Superior Street, Chicago, Illinois
Michigan Division: 1959 East Jefferson, Detroit, Michigan

S A R G E N T
SCIENTIFIC LABORATORY SUPPLIES

When inquiring specify CEP5986 . . . see information request blank, pgs. 2-3

Have you a Corrosion Problem?

INVESTIGATE *Beckman* pH CONTROL

An efficient solution to many plant corrosion problems—often without the need for hard-to-get corrosion-resisting alloys!

Investigate TODAY what Beckman pH Control can do in solving YOUR corrosion problems. Because Beckman pH Control neutralizes corrosive solutions BEFORE they contact costly plant equipment, hard-to-get corrosion-resisting materials are often unnecessary. For example . . .

IN COOLING SYSTEMS water absorbs CO₂ in cooling towers, forming carbonic acid and becoming increasingly acidic as water is re-circulated. This causes excessive corrosion of machines, condensers and other plant equipment.

SOLUTION: Many plants now guard against these risks by Beckman-controlling pH of cooling water, AUTOMATICALLY maintaining it at optimum pH for minimum corrosion.

LET US HELP YOU get longer life, better efficiency from your plant operations through Beckman pH Control. Outline your problem to our engineering department for a recommendation!

SEND FOR DESCRIPTIVE LITERATURE.

NATIONAL TECHNICAL LABORATORIES, South Pasadena, Calif.

Beckman THE LEADING NAME IN pH

When inquiring specify CEP5985 — see information request blank, pgs. 2-3



ALL of the FACTS
on a **COMPLETE line**
of **BETTER Automatic Valves**
are contained in this
NEW CATALOG!



Here is a catalog that should interest every executive, every engineer concerned with automatic regulation or control of steam, liquids, or gases, for it contains *useful information—all of the facts*—on one of the most *complete lines of better automatic valves*.

And—by "all of the facts" we do not mean a mere sales story. Such sections as those on application, features, installation, and inspection—plus *eight sections of heretofore unpublished engineering data*—make this catalog a valuable handbook of *practical information*.

If you are pushing your plant in an all-out for victory—if you must keep your automatic valves on the firing line of the battle of production, then send for your copy of this catalog. There is no cost, no obligation—simply ask for Catalog 70 . . . on your company's letterhead, please.



Foster Products

PRESSURE REDUCING REGULATORS • TEMPERATURE REGULATORS
PUMP GOVERNORS • BACK PRESSURE VALVES • RELIEF VALVES
SAFETY VALVES • SIRENS • FAN ENGINE REGULATORS
DAMPER REGULATORS • AUTOMATIC STOP AND CHECK VALVES
NON-RETURN AND TRIPLE DUTY VALVES
FLOAT AND LEVER BALANCED VALVES • ALTITUDE VALVES
LIQUID LEVEL CONTROLLERS
VACUUM REGULATORS OR BREAKERS • SIGHT FLOW BOXES
STRAINERS

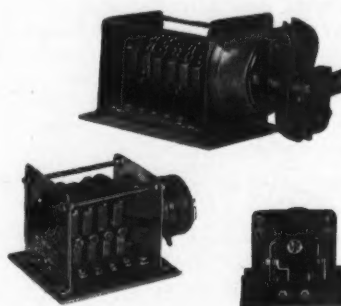
FOSTER ENGINEERING
124 MONROE STREET
NEWARK, N. J.
Company
THERE'S NOW A FOSTER VALVE FOR EVERY SERVICE

When inquiring specify CEP5987 — see information request blank, pgs. 2-3

INSTRUMENTS

Multi-Contact Timers for Control of Various Sequence Operations

Self-starting synchronous motors, contacts in plain view; can be manually operated



TWO MIN. 2 CIRCUIT TIMER — special contact assembly — and special multi-contact timer

Features — Contacts are in plain view so that their operations can be observed.

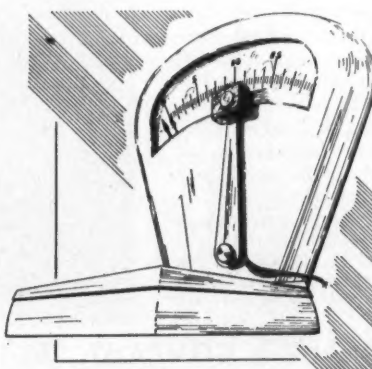
Description — Self-starting synchronous motor, complete gear trains operating in oil, bakelite cams mounted on shaft in identical pairs so that the "off" and "on" increments can be adjusted to the desired. Can be manually operated. Can be provided with remote momentary starter. Descriptive Bulletin 1500 available on request.

R. W. CRAMER CO., Dept. CEP, Centerbrook, Conn.

When inquiring specify CEP5988 — see information request blank, pgs. 2-3

Photo-Electric Cut-Off for Scales and Other Indicating Instruments

Small housings contain light source, photocell, amplifier tube and control amplifier and relay



SCANNER FOR SCALE CUT-OFF . . . on adjustable indicator pointer

or current flow may be maintained within predetermined limits with two scanner heads properly mounted.

Features — Accuracy limited only to the precision of the instrument itself. Simplicity of design and flexibility of installation. Sensitivity is such that adjustment of position of scanner provides operation at the setting desired.

Operation — Scanner should be mounted so that its posi-

Uses — To control a series of machine operations in definite order, to automatically reverse or alternate in operation a group of motors, machines or devices, to operate in a predetermined sequence as well as numerous other applications where sequence operations are of prime importance.

5 New BULLETINS tell you

How to Select THE RIGHT THERMOMETER for your Process

Wheelco has published five new Bulletins, which illustrate and describe various types of Thermometers and explain their function in relation to their intended application.

You will find a wealth of information in these Bulletins on Indicating Thermometers, Indicating Therm-otrols (Indicating, "Electronic Principle" Thermometer Controllers), Recording Thermometers and Recording Therm-otrols (Recording, "Electronic Principle" Thermometer Controllers), all of which are available in ranges from -100°F. to $+1000^{\circ}\text{F.}$, or -70°C. to $+550^{\circ}\text{C.}$ Also illustrated and described are Thermometer Bulbs, Bulb Sockets, Capillary, Capillary Armor, Charts, Chart Ranges, Scale Ranges, etc. Explanation of how the Flame-otrol (combustion safeguard), Purging Timers, Program Control and Proportioning Control can be integrally incorporated in the various Thermometers is given.

Write for any one, or all of these Bulletins without obligation.

Wheelco Instruments Co.

841 W. HARRISON STREET • • • CHICAGO, ILLINOIS

Originator of "Electronic Principle" Temperature Controls

When inquiring specify CEP5989 — see information request blank, pgs. 2-3



Some of the many different types of Dial Indicating and Recording Thermometers we make are shown here. We also make Recording Regulators and Regulators combined with easy to read Indicating Thermometers. Write for Bulletins. Specify type of instrument in which you are interested.

THE POWERS REGULATOR CO.
2756 Greenview Avenue, CHICAGO

Offices in 47 Cities—See your phone directory

50 Years of Temperature and Humidity Control

When inquiring specify CEP5990 — see information request blank, pgs. 2-3

INSTRUMENTS

TO MEASURE...

Extremely Low Gas Pressure

Quickly and Accurately

MEASURES vacuums from 0.5 to 250 microns, or from 1 to 2000 microns.

No mathematical calculation necessary.

Glass parts protected from breakage by steel case.

Long life—low maintenance.

Call the nearest G-E office for further details.

If you have ANY kind of measurement problem, call or write our nearest office for information on how the G-E Special Products Section can help you meet your individual requirements. *General Electric, Schenectady, N. Y.*

The G-E vacuum gage, Type M

800-8-8861

GENERAL ELECTRIC

When inquiring specify CEP5991 — see information request blank, pgs. 2-3

KOLD-HOLD

Industrial Sub-Zero Machines . . . for controlled temperature storage and processing

Preserve and store chemicals, serum, blood, mother's milk, etc., over long periods of time at required sub-zero temperatures with KOLD-HOLD.

Standard 2 cu. ft. machine is shown . . . other capacities up to 11 cu. ft. available. Close, accurate temperature control is provided. Send now for complete details.

NEW YORK — 1819 Broadway — Circle 63002
CHICAGO — 201 N. Wells — Randolph 3986
LOS ANGELES — 1015 W. Second — Michigan 4989

KOLD-HOLD MANUFACTURING CO.

44 N. Grand Ave., LANSING, MICH., U. S. A.

When inquiring specify CEP5992 — see information request blank, pgs. 2-3

tion is adjustable for operation throughout the indicating range of the instrument on which it is used. Suggested method, employing indicating pointer, is illustrated. Operation is then as follows: Scanner position is adjusted to point on the scale at which actuation of control is desired. Weighing operation is initiated. Light source within the scanner projects a beam of light, through an aperture to scale face, which may or may not cause reflection back to the photocell. Reflection from scale face is unimportant since it is the contrast in reflective ability between pointer and scale face that effects operation. When the indicating pointer intersects the light beam, a fluctuation is caused in the quantity of light reaching photocell. By means of the light sensitive properties of the photocell this fluctuation is converted to an electrical impulse, which receives a first stage of amplification from the amplifier tube in the scanner. Through the control amplifier, this impulse causes operation of a relay which in turn actuates a control mechanism.

Description — The equipment comprises a scanner — a small housing containing a light source, a photocell and an amplifier tube — and a control made up of an amplifier and a relay in a second housing. Used in a simple installation involving no alteration of the scale structure, the distance of the scanner from the scale face would be approximately one inch. However by using the indicator pointer with its highly polished surface, a greater reflective effect is obtained which allows a material increase in this distance. Adaptable for application by both users and manufacturers of weighing devices.

UNITED CINEPHONE CORP., Dept. CEP, Torrington, Conn.

When inquiring specify CEP5993 — see information request blank, pgs. 2-3

Precision Cleaning Machines for Rinsing, Drying and Polishing Small Parts and Bearings

Two single page bulletins feature large, detailed photographs and detailed listings of specifications of standard and heavy duty models of industrial cleaning machines for cleaning, rinsing, polishing and drying delicate, small parts that are too fragile to be cleaned manually and bearings, precision units of all types and parts that require the most careful cleaning. Specifications and features conveniently listed. Available on request.

L & R MFG. CO., Dept. CEP, 54-56 Clinton St., Newark, N. J.

When inquiring specify CEP5994 — see information request blank, pgs. 2-3

Have You A New Product?

If you have recently developed a new or improved product, a piece of laboratory or plant equipment or a new material, of specific interest in any line of chemical and process manufacturing . . . send it to our Editors. Through CHEMICAL EQUIPMENT PREVIEW'S editorial pages they will introduce it to this great field . . . with more than 27,000 copies of this publication covering every plant. This service costs you nothing, and there is no obligation. Write—The Editors.

CHEMICAL EQUIPMENT PREVIEW
737 N. Michigan Avenue

Chicago

Illinois

HARPER STOCKS

the **UNUSUAL**
AND MAKES THE
"Super Unusual"

Think of 4320 stock items of fastenings . . . including almost every conceivable type of bolt, nut, screw, washer and rivet in the non-ferrous and stainless alloys. Such a stock is one of Harper's contributions to a nation at war.

If the fastening you want isn't in this stock, Harper can make it promptly (priorities permitting) on extensive, modern, high speed machinery . . . from stocks of metals in basic forms. Submit your specifications.

WRITE FOR CATALOG

. . . and reference book. 80 pages—4 colors — 193 illustrations — numerous tables and other data. Free when requested on a company letterhead.

The H. M. HARPER COMPANY

2644 Fletcher Street • Chicago
45 West Broadway • New York
Offices in Principal Cities

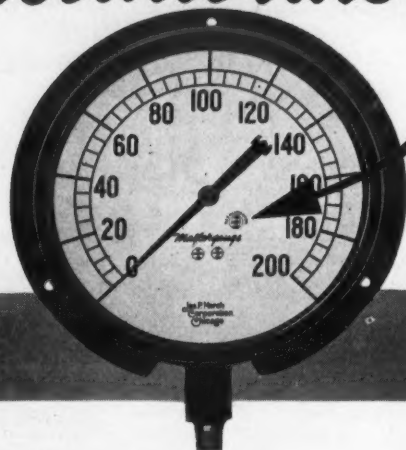


HARPER Chicago

EVERLASTING FASTENINGS

When inquiring specify CEP5995 — see information request blank, pgs. 2-3

LOOK FOR THE "Recalibrator"



when you're looking for a gauge

More and more operating men are finding every day that the simplest and wisest way to select a gauge is to look for that small "Recalibrator" screw.

It means first of all that the instrument is made by Marsh—a name that industry has respected since 1865 as a symbol of utmost accuracy and stamina in pressure and vacuum gauges.

But even more important, that "Recalibrator" screw tells you that here at last is a gauge that you can keep completely accurate at all times. Any gauge ever built can be shocked or jolted out of adjustment. But with the "Recalibrator", the twist of a screwdriver wipes out practically all such error—actually re-establishes the proper relation between the bourdon tube and the movement—recalibrates the gauge for complete accuracy at every point on the dial.

JAS. P. MARSH CORPORATION
2095 Southport Avenue, Chicago, Illinois

● The "Recalibrator" is available on all Marsh Gauges, standard on all Marsh Dial Thermometers. It is typical of the advanced design and sound engineering that marks all Marsh Products.

GAUGES • TRAPS • VALVES

MARSH GAUGES

When inquiring specify CEP5996 — see information request blank, pgs. 2-3

INSTRUMENTS

Selection Chart for Electronic Tubes

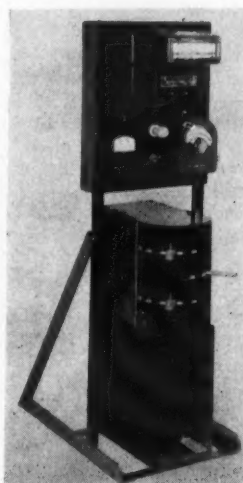
A quick selection chart of electronic tubes for industry and technical data on applications is presented in a four-page-two-colored bulletin. The chart makes it easy to choose the proper tube for an electronic device or application. Included in the tabulated data on each tube is the number of a data bulletin which is available on request and gives valuable installation and other information. Selection chart is sent on request.

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP5997 — see information request blank, pgs. 2-3

Salt Bath Heat Treating Control Keeps Heat On at Low Value

Easily operated, prevents mistakes, eliminates much finish grinding on cutting tools



SALT BATH CONTROL
protects the work

low value. When work is put into the bath it adds a definite amount of heat for a special interval. When the interval is ended, it reduces the power back to a holding level and warns the operator that the work should be removed. Operator is warned of errors as little as three degrees F in setting. In setting up for a batch of work operator first brings the work to proper temperature, he re-sets the lower of three heat selection levers for a low current value sufficient to hold the bath, yet below the value needed for actual treating. With the center lever handle he then selects a current value that is approximate for the size of the work. The uppermost handle is set to make the exact gradation of adjustment required. A timer is also set for the exact interval. The operator then touches a start button and the control takes over. When the time is completed, the current drops back to the "holding" value and a signal light flashes and warns the operator to remove the work. Should temperature rise to above correct value due to operator's error, the power to the bath is shut off entirely and too little input will show up on a pyrometer in time for operator to correct error by changing taps during run-out. *Description* — Equipment consists essentially of a panel stand on which are mounted pyrometer, timer, ammeter and signal light. Below panel is cabinet with three heat

Uses — As a temperature control for salt bath heat treating to provide greater accuracy and overcome errors of operator in setting of control.

Features — Control measures and adds the correct amount of power for the proper interval and even corrects the operator for any error on his part in setting the control. Foolproof, simple to operate. Permits prediction of size change to closer limits thereby eliminating much, if not all, finish grinding on many high speed steel cutting tools. *Operation* — Control does not turn power "off" and "on" as the temperature of the bath fluctuates but keeps the heat on at all times at a

TRIMOUNT LIQUID LEVEL GAUGES FROM 10" TO 100"!

You no longer need to buy a tank level gauge way too big for your job. A Trimount Gauge can be selected within a maximum of five inches over requirements. You save money and help conserve metal. Trimount Gauges are available calibrated in inches, gallons, pounds or whatever increments desired. Measuring liquid balances liquid being measured, with air as the medium in connecting pipes. These instruments feature accuracy and rugged design. Nothing to get out of order. Heavy plate glass protection cover.

WRITE TODAY for Catalog describing Trimount Tank Level Gauges, Manometers, Indicating Flow Meters, etc.

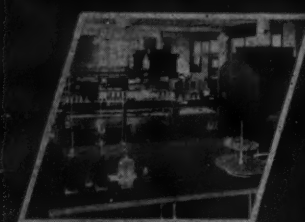
TRIMOUNT INSTRUMENT CO.

406 So. Plymouth Ct. CHICAGO, ILL.



When inquiring specify CEP5998 — see information request blank, pgs. 2-3

ALBERENE STONE LABORATORY EQUIPMENT



New!
Would
You
like
a copy?

SALT SPRAY UNITS

Efficiency and durability of Alberene Boxes are widely recognized. We furnish fully-equipped units; to Navy or your own specifications. Prompt delivery.

Data, specifications and illustrations... factual and helpful... about Alberene Stone, the material that outlasts the building.

ALBERENE STONE CORP. OF VIRGINIA

419 4th Avenue, New York

When inquiring specify CEP5999 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW



There's always the Sunshine
AFTER THE STORM!

As each ray of light breaks through the dark clouds, after the storm, to fill the earth with sunshine, so each PALMER Thermometer is bravely doing its bit to bring back the sunshine of Peace to the World.

Every PALMER Thermometer is finding its place in the network of equipment needed to back the boys at war because:

- 1—They are extremely accurate and correctly annealed;
- 2—Their sturdy construction means long life;
- 3—The easy-reading "Red-Reading-Mercury" column eliminates error.

Just hesitate before you write that order for thermometers and you will be helping to win the war by careful selection of an instrument guaranteed to give satisfactory service.

(Catalog No. 300-D sent promptly)

THE PALMER COMPANY, Mfrs.
INDUSTRIAL, LABORATORY, DIAL & RECORDING THERMOMETERS
2519 Norwood Ave., Cincinnati, Norwood, O.—Canadian Plant: King & George Sts., Toronto

When inquiring specify CEP6000 — see information request blank, pgs. 2-3



**FLOATLESS
MAINTENANCE-FREE
LEVEL CONTROL**

NO FLOAT SWITCHES
Photoswitch Level Control operates entirely electronically.

UNLIMITED LIFE
Photoswitch Level Control has no mechanical parts to wear out.

SAFETY Photoswitch Level Control passes only microamperes of current through the liquid—is safe with combustibles.

OPERATION
Two probe rods reach into the tank to the levels where pump-on and pump-off operations are required. Actual contact of the probes with the liquid operates a Photoswitch Electronic Control which makes and breaks the pump-control circuit.

PHOTOSWITCH Electronic Level Controls, effective for all conductive and non-conductive liquids and powders, are available for single-level indication or control, on and off pump control at two levels, and boiler feedwater control.

Write for Level Control Bulletin 1100

PHOTOSWITCH INCORPORATED
PHOTO-ELECTRIC & ELECTRONIC CONTROLS FOR EVERY INDUSTRIAL PURPOSE
CAMBRIDGE, MASS. • District Offices in ALL PRINCIPAL CITIES

When inquiring specify CEP6001 — see information request blank, pgs. 2-3

INSTRUMENTS

selector levers. A foot operated circuit interlock "unloads" the hand lever switches to avoid burning off their contact points when a change in heat selection is being made. Entire control stand occupies eight square feet.

UPTON ELECTRIC FURNACE DIV., Dept. CEP, 7450 Melville Ave., Detroit, Mich.

When inquiring specify CEP6002 — see information request blank, pgs. 2-3

Electrical & Mechanical Operation-Time Recorders

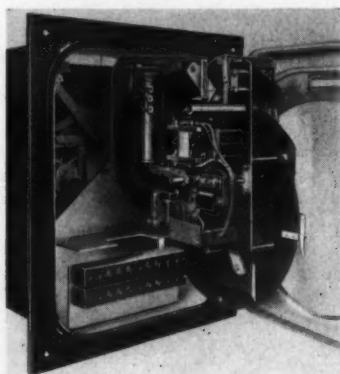
Electrically operated and mechanical operation-time recorders and their application in process industries and related importance in test engineering, setting job standards, cost accounting and production control are discussed in bulletin including photos of typical installations and diagrams. Complete specifications for single and multi-pen instruments. Available on request.

FOXBORO CO., Dept. CEP, Foxboro, Mass.

When inquiring specify CEP6003 — see information request blank, pgs. 2-3

Two Pen Recorder Marks Related Flow Records on Same Chart

Ratio indicating pointer easily installed for quick, accurate check of relationship



RECORDER . . utilizes two meter receivers in one case

within one double depth case and achieves the desired result without complications and no loss of accessibility. Both receiver mechanisms can be swung out and operate in the swing out position. The connection between the rear receiving mechanism and its pen arm must necessarily be detachable and is arranged with a self-aligning v-notch junction. When two related measurements are involved the operation has often sufficient guidance by observing the coincidence or lack of it of the two pens. It is not required that operator note which pen is which as ratio indicating pointer can be incorporated. The clearly visible red target moves to right or left from the center point on the scale and thus shows at a glance whether there is an excess of deficiency of one of the quantities with respect to the other. Pointer movement is two and one-half times greater than the difference between the two recording pens and is thus more readily noted. Integrating feature can be furnished on both mechanisms but reading of rear mechanism integrator requires opening case and swinging front mechanism forward.

COCHRANE CORP., Dept. CEP, 17th & Allegheny, Philadelphia, Pa.

When inquiring specify CEP6004 — see information request blank, pgs. 2-3

✓ *check substitute materials*



with

Taber ABRASER

New, more accurate technique for testing wear resistance of surface finishes and sheet material is now possible with Taber Abraser.

Scientific wearing action by "Calibrase" wheels is automatically totalled on built-in wear cycle counter.

Today's substitute materials make Taber Abraser an absolute necessity in your plant and laboratory. Write for Bulletin 2014 illustrating wide applications.

TABER INSTRUMENT CORP.

111CP Goundry St.

North Tonawanda, N. Y.

Designers and Builders of Precision Scientific Apparatus

When inquiring specify CEP6005 — see information request blank, pgs. 2-3

**WAR DEMANDS
RIGID FUEL ECONOMY**

**CUT YOUR
STACK LOSSES**
with the aid of the

**SIMPLIFIED FYRITE
CO₂ ANALYZER**



The first step towards fuel economy is to control chimney losses. The FYRITE "Orsat" CO₂ Analyzer makes accurate flue gas tests easy — instantly exposing fuel wasted up the stack. The FYRITE is conveniently held in the hand while analysis is taken. It is accurate within 1/2 of 1% CO₂; spill-proof; cold-proof; rugged, durable, compact. More than 7000 in use.

RETURN COUPON BELOW. Obtain new bulletin on FYRITE and learn how to get immediate delivery under priority regulations.

\$18.50 COMPLETE
WITH INDUSTRIAL TYPE FLUE FILTER

BACHARACH
Industrial Instrument Co.
7000 BENNETT ST.
PITTSBURGH, PA.

SEND BUL. 338 on FYRITE "ORSAT"

Name _____

Address _____

City _____ E

When inquiring specify CEP6006 — see information request blank, pgs. 2-3



WATCH TEMPERATURES WHEN WORKING SYNTHETICS

There is hardly an industry that has not been called upon to manufacture its product from unfamiliar or synthetic materials. Temperatures in practically all processing operations must therefore be rescheduled. A dependable surface pyrometer is now more essential than ever before. The CAMBRIDGE Pyrometer makes the ideal shop instrument. It is accurate, rugged, quick acting and easy to use. It will help cut down spoilage when training old as well as new hands in making the change over.

Cambridge Instrument Co., Inc.
3732 Grand Central Terminal, New York, N. Y.

The surface model is for checking surfaces of flat surfaces, still or moving rolls, the needle type for within the mass, the mold for reaching into cavities. Send for particulars.

CAMBRIDGE
SURFACE • NEEDLE • MOLD
PYROMETERS

When inquiring specify CEP6007 — see information request blank, pgs. 2-3

2

COMPLETE LINES OF MOTOR CONTROL

FOR CLASS I, GROUP D, HAZARDOUS LOCATIONS

AIR-BREAK
explosion-resisting equipment embodies standard Square D motor control devices mounted in heavy, ribbed, cast iron enclosures. Vertical action contacts provide double-break silver operation, complete accessibility, and low maintenance expense.

at left: Air-break Starter in Class I, Group D enclosure

OIL-IMMERSED
starters feature easy installation and servicing. Cast iron head has wiring manifold which permits conduit entrance from five directions. Removable cover plate facilitates wiring. Track-type guides prevent swinging or splashing while raising or lowering tank.

at right: Oil-immersed Combination Starter

SQUARE D COMPANY
DETROIT - MILWAUKEE - LOS ANGELES
KOLLMAN INSTRUMENT DIVISION, ELMHURST, NEW YORK
IN CANADA: SQUARE D COMPANY CANADA LIMITED, TORONTO, ONTARIO

When inquiring specify CEP6008 — see information request blank, pgs. 2-3

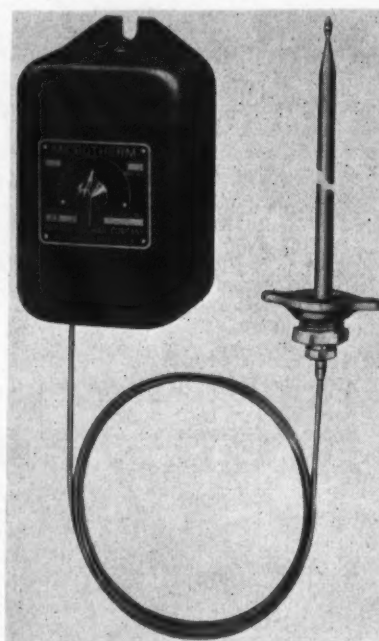
INSTRUMENTS

Remote Bulb Thermostat Controls Tank, Liquid, Dryer Temperatures

Provides for readily accessible mounting free from dust, dirt and vibration

Uses — For the control of temperatures in ducts, tanks, liquid, lines, dryers, cooking kettles and similar applications.

Description — This "Remote Bulb Microtherm" is a liquid filled remote bulb proportioning thermostat. This type of instrument is used when it is desirable to mount the mechanism where it is readily accessible, free from vibration, dust, dirt and extreme temperatures. They are available with



REMOTE BULB THERMOSTAT

or without armored tubing. Complete specifications regarding this equipment and its various applications are presented in detail in Bulletin Number F-1420-3. It will be sent free upon request.

BARBER-COLMAN CO., Dept. CEP, Rockford, Ill.

When inquiring specify CEP6009 — see information request blank, pgs. 2-3

Marking Stick Provides Easy Way To Observe Surface Temperatures

Mark becomes shiny when melting point is reached, used in metal processing and with machinery

Uses — For observation of surface temperatures. For wide application in many heat treating operations. To signal desired preheating temperatures in the welding of steels, alloys, cast iron and non-ferrous metals. For local heating, and fabrication of metals generally. For preventing cracks during metal processing, to indicate approach of safe temperature limits in making costly castings. For checking thermocouples. For measuring surface temperatures of machinery and motors. Protecting bearings and insulation.

Features — Observation of temperatures requires no more equipment or effort than drawing a line with piece of chalk. As these sticks act in what is termed the "black range," they provide a simple means of measurement that has not heretofore been available for these temperatures.

Description — These temperature indicators serve a similar purpose but act in a lower range of temperatures than do the pyrometric cones which have been employed in

5 Reasons Why We Measure Our Valuable Stored Liquids With **LIQUIDOMETER Tank Gauges** "THEY'RE ALWAYS DEPENDABLE"

- 1 100% automatic.
- 2 No pumps, valves, or auxiliary units needed to read them.
- 3 Models available so that readings can be taken remotely from or directly at the tank.
- 4 Accuracy unaffected by specific gravity of tank liquid.
- 5 Approved for gauging hazardous liquids by Underwriters' Laboratories and other similar groups.

Write for complete details



THE **LIQUIDOMETER** CORP.
38-18 SKILLMAN AVE., LONG ISLAND CITY, N. Y.

When inquiring specify CEP6010 — see information request blank, pgs. 2-3



EASY ON THE EYES!

Ruggedness and dependable accuracy, too, distinguish the ALL-METAL THERMOMETER

Readability in an indicating thermometer is an outstanding advantage if full dependence can be placed on each reading. The WESTON thermometer provides both these essential factors . . . readability and dependability . . . without compromise. It's simple, all-metal temperature principle . . . minus gases, liquids, capillary and involved mechanisms . . . assures "on-the-dot" accuracy over a far longer period of time. In addition, this all-metal construction safeguards against failures due to vibration or over-ranging. . . Literature gladly sent on request, although production facilities are at present devoted solely to the war effort. Weston Electrical Instrument Corp., 586 Frelinghuysen Ave., Newark, N. J.

WESTON All-Metal TEMPERATURE GAUGES

When inquiring specify CEP6011 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

CLOSED GLASS FRONT INDUSTRIAL

RED READING MERCURY

★ H-B has been specializing in fine thermometer manufacture for many years. If you have special problems or requirements necessitating specially built precision thermometers, then write to our technical department; there is no obligation.

ILLUSTRATED CATALOG
SENT ON REQUEST

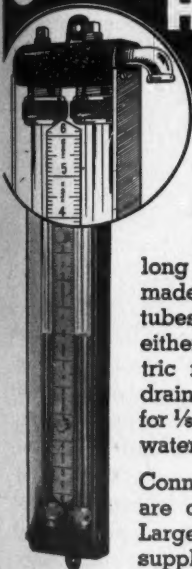


H-B INSTRUMENT COMPANY
INCORPORATED
2510 N. Broad St., Philadelphia, Pa.

H-B THERMOMETERS

When inquiring specify CEP6012 — see information request blank, pgs. 2-3

Connelly EXTRA HEAVY DUTY Manometers



FOR PERMANENT
MOUNTING

The new Connelly Manometer, Model 3400 — built for extra heavy duty — can be depended upon for accuracy and long life under all conditions. It is made with large bore, clear glass tubes for easier reading, graduated either in inches and tenths or in metric measure. Gland packed, with drain plugs at the bottom and fitted for 1/2" pipe connections. For use with water or special anti-freeze solution.

Connelly Model 3400 Manometers are carried in stock in five sizes. Larger or intermediate sizes can be supplied if desired.

Write today for bulletin and prices.

CONNELLY IRON SPONGE &
GOVERNOR CO.
CHICAGO, ILL. — ELIZABETH, N. J.

When inquiring specify CEP6013 — see information request blank, pgs. 2-3

JANUARY-FEBRUARY, 1943

INSTRUMENTS

laboratories to observe temperatures over 1065 F. Cones are primarily used for furnaces while these sticks can be used wherever there is a surface where a mark can be made. In contrast to the cone which has a "falling point," at which its tip begins to soften and fall over, the marks of the stick become shiny in appearance when the melting point is reached. Set of 15 sticks cover range of 125 F. to 700 F. and have accuracy of within 1% of stated melting point. Each stick is different color for identification. If desired only one stick may be purchased. Furnished in paper case. Each stick foil covered for protection. Name is "Tempilsticks." Available from

FISHER SCIENTIFIC CO., Dept. CEP, 717 Forbes St., Pittsburgh, Pa.

When inquiring specify CEP6014 — see information request blank, pgs. 2-3

Device Measures Static Hazard in Employees, Machines and Flooring

*Now in daily use in plants to guard against
explosions; complete unit in portable case*

Uses — Testing resistance of workers, machinery and flooring to ground. Now in daily use by many plants to check such conditions before beginning any operations where static hazards may be involved.

Features — Safe, low voltages used for testing humans. Complete unit is housed in portable, vapor-proof case.

Performance — This device was originally designed to prove the capacity of a special

conductive sole of shoes made especially to drain off static charges from the body. It revealed that some men with conductive shoes were safe and that others were not. In the latter case the reason was wearing of wool and silk socks which are conductors. It also showed that electrolysis can be set up between the flooring and the conductor and the destructive action will result in a faulty floor. The device is designed to reveal such hazards. **Description** — Instrument is known as the "Resistometer," and is quite simple in operation. To be tested employee stands on two plates. Immediately resistance to ground is indicated on a meter calibrated in two zones — safe and unsafe. Also in ohms from zero to 20 million — low scale 0-600, high scale .1 megohms to 20 megohms. The same instrument tests humans, machines and floors. Battery operated. Built to meet specifications of Ordinance Dept. Weight without accessories, 17 lbs. With accessories, 27 lbs. (approximate).

DAVIS EMERGENCY EQUIPMENT CO., Dept. CEP, 56 Halleck St., Newark, N. J.

When inquiring specify CEP8015 — see information request blank, pgs. 2-3

For complete information regarding products described in this issue a handy request slip is provided between pages 2 and 3. Check the items that interest you, fill in name and address and send it to publishers. Information will come to you promptly.



METER UNIT . . . shows resistance
to ground, 0-20 millionohms

Zenith CONTINUOUS DEWATERING PRESS

PROCESSES UP TO 15 TONS PER HOUR

The Zenith is the ideal continuous press for efficiently dehydrating large quantities of any type of pulp. Pressure is transmitted by means of a huge slowly revolving spiral-bladed spindle. Drainage is doubly efficient because the water drains to the inside through the hollow, perforated brass covered spindle and to the outside through the perforated cylindrical shell. Both the spindle and the shell are perforated with very small holes to reduce pulp loss to a minimum.

Eight resistors within the press keep pulp rolling over and prevent it from revolving with spindle. Where required these resistors can serve a dual purpose to heat pulp giving a more efficient and easier pressing.

If your processing requires the dewatering of any relatively free draining crystalline, granular or fibrous slurries, write for complete facts to Jackson & Church Co., Saginaw, Michigan.



When inquiring specify CEP0016 — see information request blank, pgs. 2-3

6 WAYS TO DO A BIGGER WAR JOB WITH STAINLESS STEEL PROCESSING EQUIPMENT

#5—INSPECT THE WELDED SEAMS

Before "inducting" a new processing vessel into war work examine its joints and welded seams. Improper welding can often be recognized with the naked eye. The diagrams at the right may guide engineers in detecting improper welds.

For years, S. Blickman, Inc., has devoted its large facilities mainly to the fabrication of stainless steel equipment in gauges up to 3/8" thick. Our know-how assures you of processing equipment with welded seams that stand up under wartime production.

ALL ORDERS SUBJECT TO GOVERNMENT PRIORITY REGULATIONS

*Fifth in a series of advertisements written in the interest of greater war production.

Send for our brochure "What to Look for When You Specify Stainless Steel for your Processing Equipment."

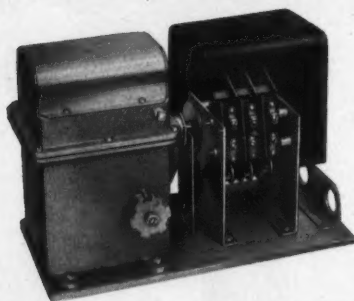
S. BLICKMAN, INC.
701 GREGORY AVE. WEEHAWKEN, N. J.

TANKS—KETTLES—CONDENSERS—AGITATORS—EVAPORATORS—PANS—VATS—CYLINDERS



When inquiring specify CEP6017 — see information request blank, pgs. 2-3

BARBER-COLMAN MOTOR-DRIVEN PROGRAM SWITCHES



For controlling sequence operations, such as a battery of compressor motors or pumps, a series of solenoid or motor-operated valves on refrigeration units, sprinkler systems, pasteurizers, and the like, and for many other purposes. A variety of units are available to suit the particular needs of any system. Our engineers will be glad to provide detailed recommendations on proposed installations.



Write for Bulletin
"CONTROLS for INDUSTRY"

BARBER-COLMAN COMPANY
1201 ROCK ST. • ROCKFORD • ILLINOIS

When inquiring specify CEP6018 — see information request blank, pgs. 2-3

INSTRUMENTS

All Position Electrodes for A-C Meet Official Requirements

Designed to give a high quality deposited metal comparable to DC

Uses — This electrode is designed specifically for all position welding of mild steel with A-C type welding machines.

Features — The high quality of the deposited metal of this electrode is described as being comparable to that of best D-C reverse polarity all-position electrodes.

Description — This electrode complies with all requirements of the American Welding Society Classification E6011, American Bureau of Shipping, Group HIG and BIG for A-C and other specifications qualifying it for use on war work. Physical test results made on all weld metal tensile specimens: Ultimate tensile strength, as welded 70,000 - 75,000; stress relieved 65,000 - 70,000; percent elongation in 2 in.: as welded, 25-30%, stress relieved 30-35%. Average operators have no difficulty in securing good fusion and complete penetration. Finished weld deposit is quite smooth and has uniform surface contour. Diameters 1/8 and 5/32 in. Identified as the No. 230.

AIR REDUCTION SALES CO., Dept. CEP, 60 East 42nd St., New York, N. Y.

When inquiring specify CEP6019 — see information request blank, pgs. 2-3

Portable Service Spotlight Uses Battery & Charger in Emergency

Various industrial applications; 32 candlepower, 6v., used any where in plant, also in hospitals



SPOTLIGHT FOR VARIOUS SERVICES... has battery for emergencies

light in cases of power failure or blackouts. Now used in aircrafts, ordnance and numerous defense plants. A practical unit in First Aid Stations.

Features — Inexpensive 32 candlepower spotlight portable

Uses — Adapted for various industrial uses where a spotlight that can be quickly moved and accurately adjusted for maximum efficiency in direction and diffusion is desired. Originally designed for use in hospitals to provide dependable routine spotlight service with the added feature of battery and charger unit for immediate power source for emergency

RAPID—ACCURATE MOISTURE CONTROL

with the

DIETERT MOISTURE TELLER



Time required to dry many materials is one minute

Many uses

SAND — COAL — SALT — TEXTILES
WOOD—CERAMIC—SUGAR—FOOD

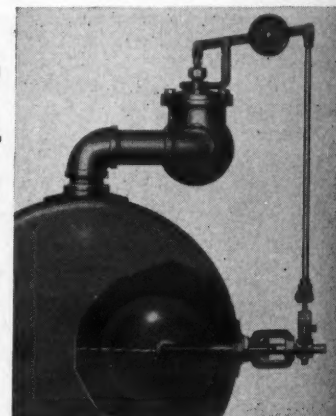
Write for Literature

HARRY W. DIETERT CO.

9330 ROSELAWN AVENUE, DETROIT, MICHIGAN

When inquiring specify CEP6026 — see information request blank, pgs. 2-3

LIQUID LEVEL CONTROL with STANDARD DAVIS PRODUCTS



ENGINEERS interested in working out the best possible liquid level control hookup will find a wide choice of units offered by Davis. The broad Davis line includes several sizes and types of float boxes, float and lever tank units, float and lever operated valves and combinations of these units for every conceivable application — direct or remote control of valves, pumps, switches, signals, indicators, etc. It may save you time and money to consult Davis first. Literature on request.

DAVIS REGULATOR COMPANY

2562 S. Washtenaw Ave.

Chicago, Ill.

When inquiring specify CEP6021 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

INSTRUMENTS

for use anywhere in plant. Carried or rolled on casters. Light mounted on telescopic stand for accurately directed downward lighting. Unit is kept connected to house current at all times so that charger will maintain battery capacity. As this requires 1/10 amp. yearly cost is well under \$3.00.

Description — Light, battery and charger housed in 18 gauge steel cabinet. Telescopic stand is attached outside cabinet by bracket. Stands 40 in. high, will extend to 80 in. above floor. Reflector is special mirror plated type. Automatic plunger light switch turns on battery power when cover of cabinet is raised, shutting it off when closed to permit house current operation of light. House current illumination of light controlled by switch on handle of lamp, which does not shut off battery current. Luminous pedal opens cabinet lid and turns on emergency current. Switch is mercury explosion proof. Battery is 18 plate, 100 ampere, 6 volt. Price \$90, complete. Standard for 110 v. AC immediate delivery. Also available on order 220 v. or DC.

LUMINOUS EQUIPMENT CO., Dept. CEP, 910 West Van Buren St., Chicago, Ill.

When inquiring specify CEP6024 — see information request blank, pgs. 2-3

Diamond Abrasive Cut-Off Blade Uses Special Bonding Process

Locks diamonds in rim without crushing to provide longer life and fast cutting

Uses — In applications where use of diamond abrasive blades are required. This blade is designed for fast, long life service in cutting all hard, brittle, non-metallic materials such as quartz, glass, porcelain, tile, ceramics and clay products.

Features — Special bonding process locks diamonds in rim of wheel without crushing.

Description — Cut off blade holds thousands of diamonds in radial position — presenting sharpest edges to quartz or other material. Full measure of diamonds is held without crushing. Identical quantity of carefully graded diamond grit carefully weighed and hand loaded into each wheel, packed to very bottom of every notch and bonded by special process. Available in two types, a hard bond that makes an exceptionally stiff and fast cutting blade and a copper bond which, though not quite so fast or stiff operates with softer action and with some increase in life. Complete information regarding this cut-off blade and also quartz cutting machines.

FELKER MFG. CO., Dept. CEP, Torrance, Cal.



ABRASIVE BLADE . . in steel or copper bond

When inquiring specify CEP6025 — see information request blank, pgs. 2-3

THIS BULLETIN SHOWS HOW TO DO IT



Yours for the asking!

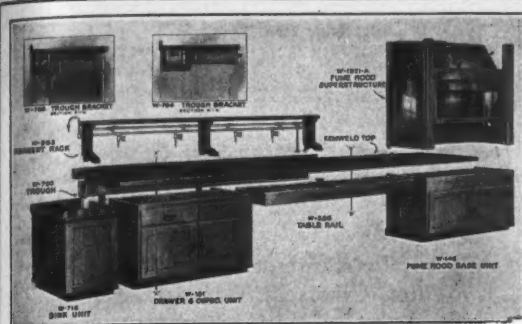
For practical, valuable hints on repairing valves—gate and globe—get a copy of this Crane Bulletin (No. 5). It shows you how to do it—step by step. These "Piping Pointers" Bulletins are designed to help you do three wartime jobs: (1) Train new men for piping maintenance; (2) Get better service from equipment; (3) Conserve the critical metals in valves and fittings. Copies free on request from your Crane Representative or by writing to Crane Co., 836 S. Michigan Ave., Chicago, Illinois.



By using "Piping Pointers" Bulletins in maintenance shops and employee training classes, as many plants are now doing, you share in Crane Co.'s basic information—gleaned from Crane's 87-year leadership in producing valves and fittings. Ask for as many sets as you can use. No obligation.

CRANE VALVES

When inquiring specify CEP6026 — see information request blank, pgs. 2-3



Note How Kewaunee Standard Units are Assembled

SIX ADVANTAGES —

BROUGHT TO YOU BY

KEWAUNEE'S "CUT-COST SYSTEM"

- Smarter Uniform Designs
- Greater Working Conveniences
- More Quality Features
- Lower Production Costs
- Easier Quicker Installation
- Earlier Deliveries

Kewaunee's new and enlarged Adrian plant streamlines and speeds up production at every step from wood kilns to finishing rooms.

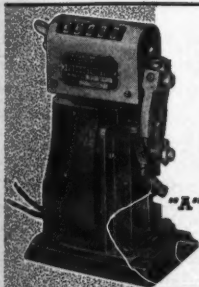
For the duration all models are available in wood only — using a minimum of critical materials. Write for catalog.



C. G. CAMPBELL, President
5011 S. Center St., Adrian, Mich.
Representatives in Principal Cities

When inquiring specify CEP6022 — see information request blank, pgs. 2-3

Soldiers of Production!



PRODUCTIMETERS

are good soldiers on the production line . . . rugged, constantly dependable, they are well fitted to guard against waste, lost time . . . conserving precious man-hours that can be used to produce MORE . . . ready to give you accurate count day after day, as you turn out essential products for winning the Victory.



Check your machines now to see where you can use Productimeters. Then . . .



WRITE FOR
COMPLETE DETAILS!

- A. Catalog 16—Electrically operated counters
- B. Catalog 7—Stroke Counters
- C. Catalog 10—Case Counters

DURANT MANUFACTURING COMPANY
1951-AN, Buffum St.
Milwaukee, Wis.

PRODUCTIMETERS
[THE SPEEDMETERS OF INDUSTRY]

192-A Eddy St.
Providence, R. I.

When inquiring specify CEP6023 — see information request blank, pgs. 2-3

NOW COMPLETE PROTECTION IN 2300-VOLT STARTERS



*SHORT-CIRCUIT PROTECTION

Current-limiting EJ-2 fuses hold short circuits to safe values.

*MOTOR PROTECTION

Isothermic overload relays guard the motor against injurious conditions.

*LONG-LIFE CONTACTOR

A sturdy clapper-type contactor meets frequent starting requirements.

*METAL ENCLOSURE

High-voltage circuits are completely segregated; metal-enclosed for protection.

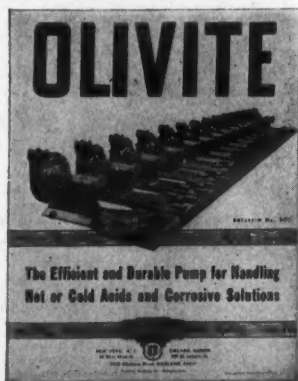
In these 2300-volt units safety is provided for you and protection for your motors and control. For the complete story on these starters, ask for Bulletin GEA-3660. General Electric, Schenectady, N. Y.

GENERAL ELECTRIC

When inquiring specify CEP6027 — see information request blank, pgs. 2-3

OLIVITE PUMP THE DURABLE PUMP

*for handling acids
and other chemicals*



Durable because parts coming in contact with the corrosive liquids are made of or protected by materials highly resistant to corrosion . . . Durable because the shaft is protected against corrosion by a special sleeve . . . Durable because pumping parts are strongly made.

Send for Bulletin 308 which gives the full details of this acid-handling pump which after being tried out has been bought by scores . . . and by the hundreds.

Oliver United Filters Inc.

DEPT. OP 33 W. 42nd ST., NEW YORK, N. Y.
1-0UF-6

When inquiring specify CEP6028 — see information request blank, pgs. 2-3



NEW LITERATURE ★

The following literature has been issued recently by manufacturers of the products discussed and is available to chemical process manufacturing executives on request. Address requests to the publishers by using handy request form, pages 2-3, or write to the manufacturers direct.

Equipment for Chemically De-ionizing Water

Four-page-two-color-illustrated bulletin describes equipment designed for de-ionizing water for chemical and industrial purposes at great economy in comparison to single-distilled water. Construction features include fine non-corrosive materials in reactor tanks and pipes. Other advantages, no heat — no fuel needed. Water not evaporated. Operation involving use of beds of special resin which remove calcium, magnesium etc., substituting hydrogen and subsequent related steps in the process are fully discussed. High flow rates, compactness, automatic operation, elimination of liming and conductivity meter indicating purity of treated water and provision for shutting off unit when purity falls below predetermined standard are also stressed. Bulletin, together with questionnaire for use in submitting water sample for analysis, available on request.

ILLINOIS WATER TREATMENT CO., Dept. CEP, 840 Cedar St., Rockford, Ill.

When inquiring specify CEP6029 — see information request blank, pgs. 2-3

Lead Coating Process Uses Non-Metallic Flux

Lead lined equipment is the subject interestingly presented in a twelve-page-and cover bulletin which emphasizes the advantage of a non-metallic flux developed by this organization. The most important of the coating operations are shown in action photos in their proper sequence and briefly described. A high speed agitator, bromine shipping container, pressure blower, autoclave and a fan housing are typical of the lead coated equipment illustrated. Also described and illustrated are multi-edged anodes (ten cornered) and a new "squirrel cage" anode. Bulletin 1700 available upon request.

U. S. STONEWARE CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP6030 — see information request blank, pgs. 2-3

Humidifiers have many Industrial Applications

Eight-page-two-color bulletin describes application of humidification and benefits provided in a wide variety of industries including paper, textiles, leather, tobacco, pharmaceutical and in testing laboratories. Data is also included on use of humidifiers for the control of dust, lint and static electricity and for employee comfort. Bulletin available upon request.

ARMSTRONG MACHINE WORKS, 880 Dept. CEP, 880 Maple St., Three Rivers, Mich.

When inquiring specify CEP6031 — see information request blank, pgs. 2-3

Ten Ways to Make Rotary Pumps Last Longer

Ten ways to make rotary pumps last longer are clearly illustrated and concisely described in a handy wall chart 7 x 10½ inches. Hung near the pumps it will provide an ever ready guide in maintenance, repair and adjustment operations and serve as a reminder to check pumps at regular intervals. Available upon request.

BLACKMER PUMP CO., Dept. CEP, Grand Rapids, Mich.

When inquiring specify CEP6032 — see information request blank, pgs. 2-3

Chemically Resistant Plastic Tubings for Water, Oil, Acid, Gas Applications

Thermoplastic tubing and fittings made to replace strategic materials such as aluminum, stainless steel, nickel and rubber is the subject of an attractive four page folder in full color. Wide applications in laboratory, in industry, in commercial uses are indicated. Features emphasized are relatively sharp melting point and high bursting pressure. Also its resistance to chemicals and solvents at room temperature, its qualities of easy bending and installation. Sizes, specifications are tabulated, bursting pressures and resistance to a number of materials are also listed. Tubing and fittings known under name of "Saran." Bulletin-P-I on request.

HODGMAN RUBBER CO., Dept. CEP, Framingham, Mass.

When inquiring specify CEP6033 — see information request blank, pgs. 2-3

Crusher Feeders for Hammer Grinding Mills

Eight-page-two-color illustrated bulletin gives complete information on single and two roll crusher feeders for hammer grinding mills. Features emphasized are variable flow control, which saves power, protection of mill against all kinds of tramp metal and uniformly mixed feeds. Blue-print reproductions provide dimension and other installation data and general specifications and prices are conveniently listed. Bulletin is available upon request.

NICKLE ENGINEERING CO., Dept. CEP, Saginaw, Mich.

When inquiring specify CEP6034 — see information request blank, pgs. 2-3

Chemical Porcelain Pipe and Fittings

Sixteen-page-and cover catalog illustrates high grade wet process porcelain pipe, fittings, spacers, Raschig rings. Emphasis is placed on economy and permanency achieved through product being highly vitrified, non-absorbent and practically indestructible and impervious to the action of chemicals and acids with the exception of hydrofluoric. Y-type and angle valves are also given detailed treatment, as are flanges. Complete specification tables and diagrams are included. This catalog and additional information on chemical or electrical porcelain available upon request.

ILLINOIS ELECTRIC PORCELAIN CO., Dept. CEP, Macomb, Ill.

When inquiring specify CEP6035 — see information request blank, pgs. 2-3

Conveyor Bulletin and Selection Chart

Rolls, frames, supports, bearings, switches and all parts are illustrated and described in 16-page-two color magazine style bulletin for ease in determining exact conveyor requirements. Applications in bottling plants, metal working, chemical and pharmaceutical houses are illustrated. Chart gives required conveyor guards for any given package. Bulletin available on request.

LAMSON CORP., Dept. CEP, Syracuse, N. Y.

When inquiring specify CEP6036 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

PRODUCTION IDEAS and DATA

Tray Type and Atomizing Deaerators, Deaerating Hot Water Generators, Cold Water Deaerators

Thirty-six-page-two-color catalog illustrates and describes in detail tray type, atomizing deaerators, deaerating hot water generators and cold water deaerators. There is a section of flow diagrams, including photographs of the units described. Several pages are devoted to the various designs made to meet space limitations and operating requirements. A special section explains metering deaerating equipped with V-notch recorders and electric systems for recording flow at a distance when the recorder is desired on a centralized panel board. Description of accessories is included. Catalog No. 3005 available on request.

COCHRANE CORP., Dept. CEP, 17th & Allegheny Ave., Philadelphia, Pa.

When inquiring specify CEP6037 — see information request blank, pgs. 2-3

War Industry Rubber Guide Book

Booklet of twenty-eight pages and cover contains in condensed, indexed form applications and properties of many types of synthetic, natural and reclaimed rubber products. The indexed section headings are: properties of Ameripol hydraulic equipment parts, sponge products, industrial rubber gloves, extruded rubber goods, rubber cements, lathe cut rubber goods and properties of reclaimed rubber. Sub-sero test data, diameter, volume, thickness and hardness tests in oil and suggested uses for Ameripol compounds are also given. "Rubber Guide Book," available upon request.

B. F. GOODRICH CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP6038 — see information request blank, pgs. 2-3

Salt Baths for Heat Treatment of Carbon & Alloy Steels, High Speed Steels & Non-Ferrous Metal

Six-page-two-color-illustrated bulletin describes in great detail properties and applications of a complete line of salts for temperatures from 300 degrees F — 2400 degrees F for the heat treatment of carbon and alloy steels, high speed steels and non-ferrous metals. Brief and informative discussion of methods of heat treating in salt baths. Specifications are listed for salts for reheating and "light" cyanide cases, neutral salt baths and for drawing operations and non-ferrous metals. Bulletin 100 is available upon request.

PARK CHEMICAL CO., Dept. CEP, 8074 Military Ave., Detroit, Mich.

When inquiring specify CEP6039 — see information request blank, pgs. 2-3

Full Frame, Semi-Frame and Fulcrum Stand Models Of Industrial Floor Scales

Features of construction and design and numerous wide practical applications in industry of floor scales are depicted in a series of sectional photos in four-page-two-color bulletin. Specifications of full frame, semi-frame and fulcrum stand models are given as well as of optional equipment including counting attachment, graphic recorder, heating unit to protect indicating mechanism, lighting device and electric cut-off to control flow of material. Bulletin 2410 available upon request.

TOLEDO SCALE CO., Dept. CEP, Toledo, Ohio.

When inquiring specify CEP6040 — see information request blank, pgs. 2-3

Centrifugal Pumps Find Many Emergency Applications

A most compact compilation of data on a complete line of centrifugal pumps is given in an eight-page-two-color illustrated bulletin which stresses the variety of emergency applications. Single and double suction, single and multi-stage, mixed and axial flow and special pumps are described. Simplified listing of specifications facilitates checking requirements. Recommendations for the application of the one package pump unit — "the Electrifugal" are included. Bulletin available upon request.

ALLIS-CHALMERS MFG. CO., Dept. CEP, Milwaukee, Wis.

When inquiring specify CEP6041 — see information request blank, pgs. 2-3

Electric Motor Selection and Care

40-page-illustrated bulletin is devoted to practical discussion of motor fitness requirements, telling how to get the most out of both new and old motors, "switching" motors from one job to another and equipping old machines with new motors. Also selection and application of motors, types of motor enclosures, motor maintenance, full load currents of motors and selection of AC control. Supplement how to save critical materials. Bulletin GED 1017 available upon request.

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP6042 — see information request blank, pgs. 2-3

"INDUSTRIAL TRUCK CARE PAYS YOU DIVIDENDS"

New Baker Bulletin Tells You How

Getting the most out of your industrial trucks, and keeping them in first class running order is more important today than ever before. To help you do this, Baker has prepared a 4 page illustrated bulletin, which outlines the essential points on their care and maintenance.

Send for Copies

Every man in your organization directly or indirectly concerned with the operation and maintenance of your electric industrial trucks should have a copy of this informative bulletin.

Written in simple, non-technical language, the bulletin tells not only what is needed for proper maintenance, but also gives pointers on daily operation and care for greatest efficiency and minimum time out for service.

"Keep 'em Running"

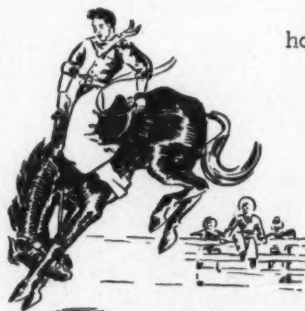


BAKER INDUSTRIAL TRUCK DIVISION of the Baker-Rauland Co.
2163 West 25th Street • Cleveland, Ohio

Baker INDUSTRIAL TRUCKS

When inquiring specify CEP6043 — see information request blank, pgs. 2-3

Simplicity Gyration Screens



Controlled Vibration

have been built and used since 1922 and today are operating in over 1400 different plants through out the country. Simplicity screens are used for every type of operation requiring a separation into sizes, reclamation of products or dewatering of liquid pulps.

Simplicity screens are used to recover good wood fibre from the waste white water in paper mills; screen starch solutions through 200 mesh cloth; dewater finely ground rubber; size and also pack every kind of food cereal, and make fine mesh separations in different chemical plant operations.



2' x 3' single deck

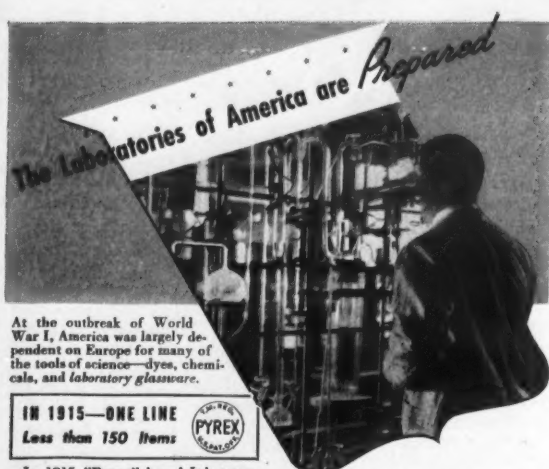
Simplicity Gyration Screens are available in sizes ranging from a 2' x 3' up to a 5' x 14', and in single, double, triple and four decks.

Write for further information.

SIMPLICITY ENGINEERING COMPANY
DURAND, MICHIGAN

For Canada: Watrous Limited, Brantford, Ontario

When inquiring specify CEP6044 . . . see information request blank, pgs. 2-3



At the outbreak of World War I, America was largely dependent on Europe for many of the tools of science—dyes, chemicals, and laboratory glassware.

IN 1915—ONE LINE
Less than 150 items



In 1915, "PYREX" brand Laboratory Glassware was announced. Less than 150 items were listed but, through Corning Research, America was on its way to independence from foreign sources of supply. World War II—and America's laboratories are prepared!

IN 1943—
THREE LINES



More than
2700 items

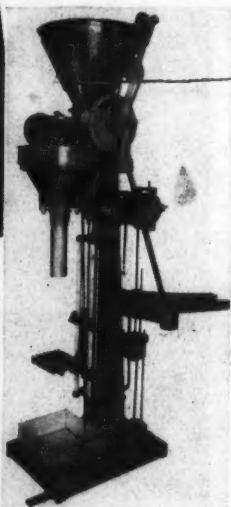
In the past quarter of a century, America's chemists and scientists have contributed to our chemical independence. And Corning Research in Glass has helped to make us independent in laboratory glassware. Today, in Catalog LP21, are listed more than 2700 laboratory glassware items. They provide laboratory technicians with the equipment for more accurate, faster, and better work. The availability of a few specific items may be affected by the war effort. Consult your laboratory supply dealer.

Here are the tools to help speed the laboratories of America and its Allies on their way to Victory. Corning Research will continue to serve in peace as in war, and to contribute to higher standards of performance.

"PYREX" and "VYCOR" are registered trade-marks and indicate manufacture by
CORNING GLASS WORKS • CORNING, N. Y.

When inquiring specify CEP6045 — see information request blank, pgs. 2-3

For
**Faster, Better
PACKAGING
OF POWDERS**
Up to 50 lbs.!



THE Triangle Model SN Auger Packer illustrated is a rugged, flexible, sensitive unit in wide use for packaging powdered chemicals, drugs and foods. Fills bags, tins or other containers. Adjustments and operation are fast and easy. Heavy construction and simplicity insure long life with virtually no maintenance. Unskilled operators can quickly reach maximum output of up to 20 packages per minute on smaller sizes. Machine will accommodate packages from 1 lb. up to 50 lbs. For full details write today outlining your requirements.

TRIANGLE PACKAGE MACHINERY CO.

917 NO. SPAULDING AVENUE, CHICAGO

BRANCHES IN

PRINCIPAL CENTERS

WEIGHERS — FILLERS — CARTON SEALERS

When inquiring specify CEP6046 — see information request blank, pgs. 2-3

NEW LITERATURE

National Paint Dictionary Now Available In Second and Revised Edition

The National Paint Dictionary is now offered in its second edition which has been carefully revised. It is a most complete work condensed into 224 pages. It provides a valuable reference volume for chemists, production managers, purchasing agents and all directly or indirectly concerned with the manufacture, distribution or application of paint products. It includes definitions of trade names of raw materials used in the paint and allied industries, describes all manner of testing devices and apparatus used in the laboratory. All suppliers of raw materials and equipment in the United States were invited to participate by submitting information to be used in free listings of their products and their physical and chemical properties. Numerous charts and tables are used effectively in presenting this data and many illustrations add interest and augment the text. Revisions have been made to give as complete coverage as possible of the field and to keep abreast of developments. The volume, of convenient 9 x 12 in. size is bound in green Fabrikoid, trimmed with gold and red stampings. Limited edition. Price \$7.50 — postage prepaid if remittance is sent with order.

STEWART RESEARCH LABORATORY, Dept. CEP, 1340 New York Ave., Washington, D. C.

When inquiring specify CEP6047 — see information request blank, pgs. 2-3

Overhead Handling Equipment

Tramrail installations are interestingly described and illustrated in large action photos of equipment in actual use in recent issue of manufacturer's publication. Included in this selection are applications in making steel furniture, glass, bread and other bakery products and yarn dyeing. Issue referred to is volume 1, number 2 of the Graphic.

CLEVELAND CRANE & ENGINEERING CO., Dept. CEP, 1129 E. 283rd St., Wickliffe, Ohio.

When inquiring specify CEP6048 — see information request blank, pgs. 2-3

Electric Air Cleaner Has Wide Variety of Practical Applications in Industrial Plants

An electric air cleaner and seven of its most outstanding applications are described in a six-page bulletin. Typical of these is its use where precision engine parts are manufactured, inspected and assembled. Illustrations show how this unit, named the "Precipitron," operates and include cut away views of the power pack and cells. Also a cut-away view of the unit as a cleaning component of an air conditioning system. Bulletin B-3083 available upon request.

WESTINGHOUSE ELECTRIC & MFG. CO., Dept. CEP, East Pittsburgh, Pa.

When inquiring specify CEP6049 — see information request blank, pgs. 2-3

Viscous Liquid Pump Data

Complete data on line of viscous liquid pumps is given in two page bulletin containing detail drawings, charts giving speed, capacity, pressure and power consumption. Outstanding design features are impressively emphasized in diagram treatment of jumbo photo of unit. Pump is arranged for motor drive through v-belts to give quiet slow speed handling of heavy liquids such as heavy fuel oil.

TUTHILL PUMP CO., Dept. CEP, 939 E. 95th, St., Chicago, Ill.

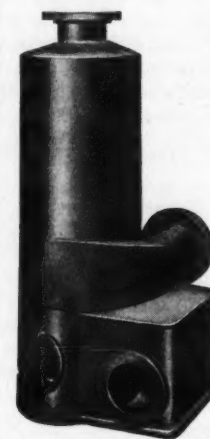
When inquiring specify CEP6050 — see information request blank, pgs. 2-3

consult

KIRK & BLUM

for the fabrication of sheet steel and light plate work

We are completely equipped with "up to the minute" facilities for fabricating sheet steel and light plate work. Your specifications are strictly adhered to and work is completed in a craftsman-like manner.



Our Organization of Engineers and Mechanics has a background of more than a third of a century in sheet metal fabrication. Send blue prints for prompt quotations.

Capacity $\frac{3}{8}$ " and lighter specializing in sheet steel, stainless (all types), monel or other alloy sheet and plate.

Write for Booklet—"Data on Kirk & Blum Production Facilities."

THE KIRK & BLUM
MANUFACTURING CO.
2833 Spring Grove Ave.
Cincinnati, Ohio

When inquiring specify CEP6051 — see information request blank, pgs. 2-3

FILTER Your LIQUIDS WITH BOWSER FILTERS!

A Type

FOR MANY USES

★

BATCH TYPE

CONTINUOUS TYPE

CLOTH BAG TYPE

WIRE GAUZE

PLATE TYPE

GRAVITY TYPE

PRESSURE TYPE

SELF-CLEANING

TYPE

BACK WASH TYPE

DIATOMACEOUS

EARTH TYPE

There is more to the filtering of liquids than the quality of the filtrate. Flow per hour . . . length of filtering cycles . . . frequency of cleaning . . . operating costs . . . labor . . . and original investment are all factors of prime importance. To gain the advantage of all these factors is the reason so many industries use Bowser Filters. A wide range of pressure filters, diatomaceous earth filters, cloth bag type, automatic self-cleaning filters, batch and continuous type gravity filters in many sizes and for many liquids are at your service. To filter right . . . write Bowser today!

S. F. BOWSER & CO., Inc.
Fort Wayne, Indiana



LIQUID CONTROL SPECIALISTS SINCE 1885
METERING • DISPENSING • STORING • LUBRICATING • FILTERING • DISTILLING

When inquiring specify CEP6052 — see information request blank, pgs. 2-3

NEW LITERATURE

Blast Furnace Raw Materials, Products, By-Products and Their Chemical Analysis

Comprehensive treatment of data and a wide variety of subject matter relating to blast furnaces is presented in an attractively bound, 250 page book. Particular emphasis is placed on blast furnace raw materials in view of their great importance in blast furnace operation. Their proper preparation and utilization are dealt with in detail. The book is of great practical value in its relation to requirements for accurate knowledge of the composition of all ingredients which calls for detailed rules of sampling and analysis of coal, coke, iron ores, fluxes, water and air-blast; and where the very close working specifications for the different grades of hot metal and merchant pig iron have tightened the specifications for the raw materials. Main subject headings: Iron-bearing Materials, Fluxing Stone, Blast Furnace Fuel, Chemical Principles, Burdening the Blast Furnace, the Blast, Pig Iron & Ferro-Alloys, Blast Furnace Slag, Blast Furnace Gas, Sampling and Analysis of Iron Bearing Materials, Fluxing Stone, Fuel, Pig Iron, Pig Iron & Ferro-Alloys, Blast Furnace Gas. Appendix. Index. Arrangement makes it a most convenient reference work. Price, \$3.75.

CHEMICAL PUBLISHING CO., Dept. CEP, 234 King St., Brooklyn, N. Y.

When inquiring specify CEP0053 — see information request blank, pgs. 2-3

Boiler Room Valve Has No Threaded Parts, No Wedge Action, Regrinds Itself

Valves for blow-off, water columns and other boiler room services are described and illustrated in two-color-thirty-two-page bulletin. Detailed sectional photos show features of construction and design including use of disc moving across outlet port and operated by a wrench to provide tight, leak-proof seal, elimination of threaded parts, unrestricted passage, rotation of disc regrinds sealing surfaces. Also described are angle and straight-way type valves, installed with hand wheels, duplex units comprising either the aforementioned and the wrench operated quick opening valve and a weight operated pendulum stop model well adapted for use between fuel oil tank and burners to shut off oil lines in case of fire which melts the fusible link in the weight-supporting device. Specification tables and price lists are included. Bulletin E-100 sent on request.

EVERLASTING VALVE CO., Dept. CEP, 49 Fisk St., Newark, N. J.

When inquiring specify CEP0054 — see information request blank, pgs. 2-3

Portable Precision Grinders and Accessories

Thirty-six-page-two-color catalog describes line of precision grinders. Each grinder is illustrated and principal dimensions are given in outline drawings. Included are grinders for heavy duty work, yet easily set up on many machines, a versatile small grinder which, for example can be mounted on bench lathe for grinding a combination blanking drawing die, quickly set up on planers, shapers and other machine tools. Various hand grinders are also given detailed treatment. More than 15 tools are listed and carefully segregated to insure selection correct accessories with each tool. Grinding quills are illustrated with each grinder and the range of work that can be handled is specified. Cross sectional drawings explain internal construction. Catalog No. 42 available upon request.

DUMORE CO., Dept. CEP, 14th & Racine Sts., Racine, Wis.

When inquiring specify CEP0055 — see information request blank, pgs. 2-3

Just out! NEW 16-PAGE BOOKLET!

TELLS HOW TO OBTAIN FLUORESCENT EQUIPMENT FOR ESSENTIAL WARTIME LIGHTING NEEDS!

SIMPLY and understandably written, this new 16-page booklet, "Relighting with Fluorescent in Wartime", is a digest of WPB orders and priority procedures as they affect fluorescent lighting in wartime. It is a working manual designed for the use of war industries to help wartime buyers and users of fluorescent lighting obtain essential equipment.

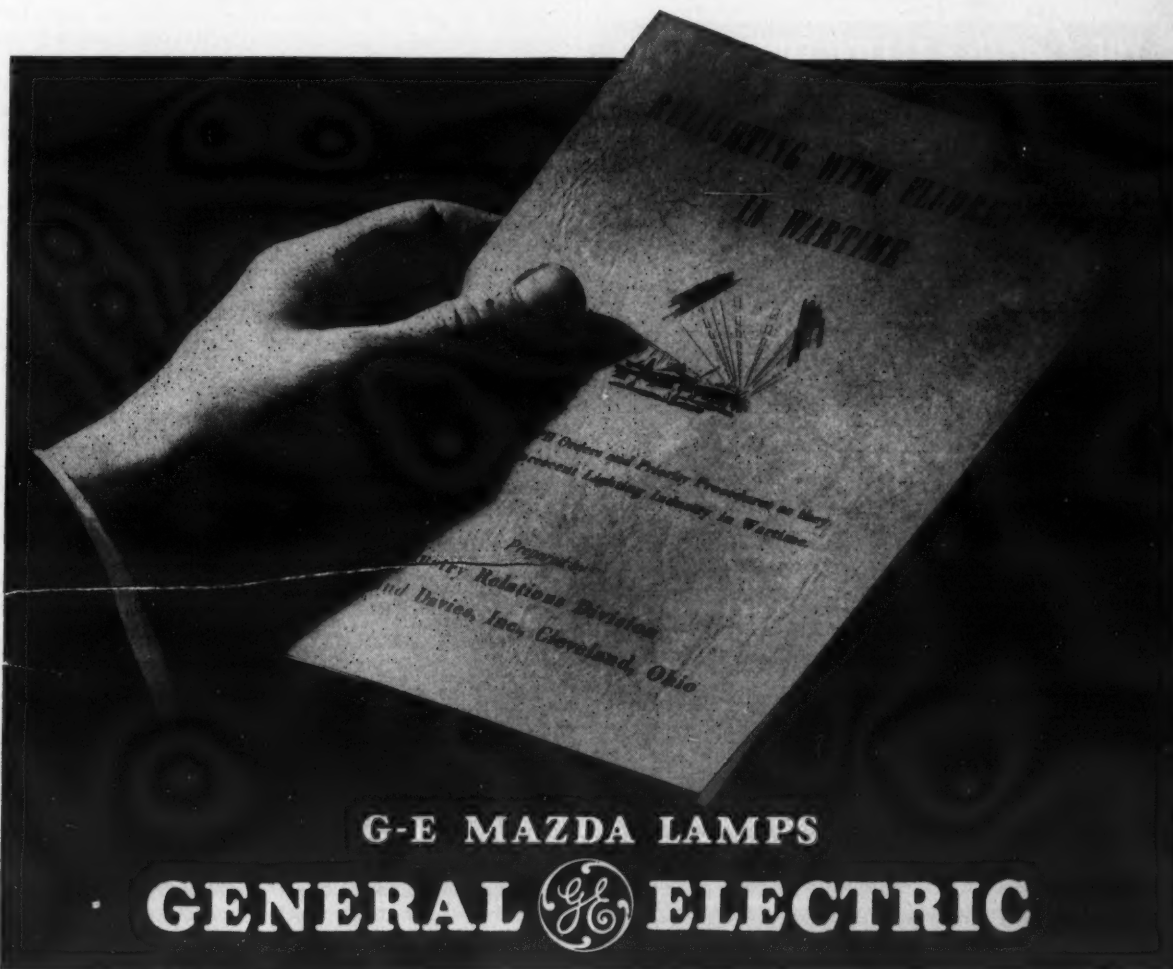
Among the subjects covered are the following: Why relighting jobs aren't handled like new ones . . . WPB's attitude toward lighting . . . How lighting has been

restricted . . . Where and how fluorescent lighting fixtures may be sold . . . Filament lighting equipment . . . How to apply for a rating . . . "Do's and Don'ts" for war plants requesting new fluorescent equipment . . . Things to think about before requesting priority ratings on fluorescent fixtures . . . Why we have priorities on lighting fixtures.


* * *

Also contains reproductions of necessary forms required for obtaining priority ratings.

Copies of this manual are available through your G-E Lamp Division office or from General Electric Company, Dept. 166-CEP-1, Nela Park, Cleveland, Ohio.



G-E MAZDA LAMPS

GENERAL  ELECTRIC

When inquiring specify CEP0056 . . . see information request blank, pgs. 2-3

GET THE FACTS ON THIS ALLOY CASTING SERVICE



Write for
**FREE
DATA
SHEET**

Condensed into one file-size reference sheet are complete data on the products and services of The Cooper Alloy Foundry Co. Included is a full listing of Cooper stainless steel, monel and nickel alloys... their analyses, physical properties, recommended applications, A.I.S.I., A.S.T.M. and other equivalent designations. Get the facts on Cooper... write for this data sheet today.

THE Cooper ALLOY FOUNDRY CO.
150 BLOY STREET • HILLSIDE, NEW JERSEY

When inquiring specify CEP6057 — see information request blank, pgs. 2-3

**RELIANCE
VOS
DRIVE**

**AN ALL-ELECTRIC
ADJUSTABLE-SPEED DRIVE
for A-C. CIRCUITS**
Speed Ranges up to 16 to 1
Sizes — 1 to 30 hp

1. DIRECT DRIVE. Fewer parts, lower cost, and less space needed because the drive is direct. No intermediate speed-changing device. Get power closer to where you want it. Streamline your machine design.

2. SPEED CONTROL CONVENIENCE. No limitations. You can place your speed-changer and start-stop button at any point to which a wire can be run. Control is within easy reach.

3. FROM A-C. POWER SOURCE. All these advantages can be had at a low price through the "packaged" V+S Speed Control unit. You can mount it anywhere. Simply connect it by three wires to a 3-phase a-c. power circuit.



ALSO: Quick stopping, reversing, speed-setting, safe speeds for threading, ample starting torque with smooth acceleration. Bulletin 310.

RELIANCE ELECTRIC & ENGINEERING CO.
1088 IVANHOE ROAD • CLEVELAND, OHIO
Sales Offices in Principal Cities



When inquiring specify CEP6058 — see information request blank, pgs. 2-3

NEW LITERATURE

New Guides Summarize Current Priority and Import-Export Regulations

A War Controls Guide covering every price ceiling and rationing order and every WPB "L", "M", and "P" regulation is issued by publishers of leading business daily. Printed in tabloid size on news stock the material is presented in thirty-two pages, arranged for quick reference. Its main features are integration of all price, priority, and rationing regulations in order to give at a glance a complete picture of all controls affecting a commodity or industry. Elimination of all expired, obsolete or superseded orders gives immediately the current status of regulations without tracing an order through a long series of amendments, many of which may have been changed again at a later date. The Guide deals only with regulations covering individual commodities, manufactured goods or industries. The wide field of general priority regulations will be covered in two manuals now in preparation. The War Controls Guide can best be described as an index and digest of regulations. A Keyword index lists in alphabetical order materials, manufactured products, industries or topic. Carefully selected cross index references aid in locating the exact heading under which an order has been placed in the Compendium. There is also a numerical order index. Where an order has been superseded the new number is given. If obsolete, expired or if no order has been issued this is also indicated. To keep the Guide up to date between issues, the publishers in the Tuesday edition of their daily list recent new regulations. A similar guide summarizes the controls in imports and exports along with shipping priority rating and licensing symbols assigned to the various commodities. Copies of either of these guides are available at 25 cents each.

NEW YORK: JOURNAL OF COMMERCE, Dept. CEP, 63 Park Row, New York, N. Y.

When inquiring specify CEP6059 — see information request blank, pgs. 2-3

Four-Lamp Fluorescent Lighting Ballast

Savings in critical materials, ballast costs and reduced power consumption attained by use of new ballast designed for use with four 100 watt fluorescent lamps are impressively shown in three-color-illustrated bulletin of twelve pages. Case history of results of extensive use in large defense plant is cited. Diagrams shows recommended installations for both small and large plants and also for instances where plant wiring and lighting circuit capacity is not adequate and use of larger dry-type insulated transformers is necessary to derive correct voltage from 480 or 600 volt three phase delta circuits. Bulletin GES 3033 sent on request.

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP6060 — see information request blank, pgs. 2-3

23 Ways to Conserve V-Belt Drives

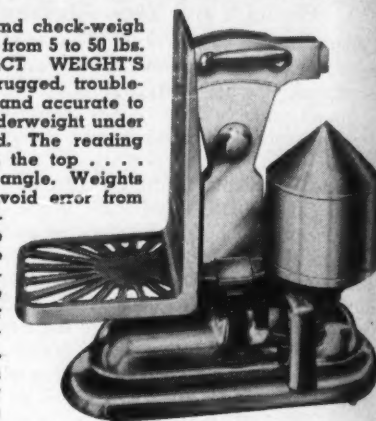
Sixteen-page-and-cover-booklet printed in two colors as its title implies gives "23 Ways to Conserve the Life of Multiple V-Belt Drives." This booklet is a contribution to the rubber conservation program. Concise data augmented by charts and drawings gives pertinent facts on the respective savings and losses that result from overbelting and underbelting, proper pulley sizes, proper speeds and numerous important precautions to be observed in installation, operation and maintenance. Booklet is available upon request.

MULTIPLE V-BELT DRIVE ASSN., Dept. CEP, 140 So. Dearborn St., Chicago, Ill.

When inquiring specify CEP6061 — see information request blank, pgs. 2-3

For Floor & Low Bench Packaging Operations...

If you package and check-weigh bags and cartons from 5 to 50 lbs. investigate EXACT WEIGHT'S Model 1038. It's rugged, trouble-free in operation and accurate to 1 oz. over and underweight under full carrying load. The reading dial is placed in the top... visible from any angle. Weights are covered to avoid error from loose material collecting on the weight platter. The scale works accurately anywhere regardless of floor level — no leveling necessary. Equipped with handles for easy transportation in the plant.



EXACT WEIGHT Scale Model 1038. For fast, accurate bag and carton weighing; equipped with carrying handles for easy portability requires no leveling for uneven floors or low benches; top reading dial graduated 8 ozs. over and underweight. Sensitive to 1 oz.—Capacity to 53 lbs.

Write for complete specifications for chemical processing operations. Do it today!

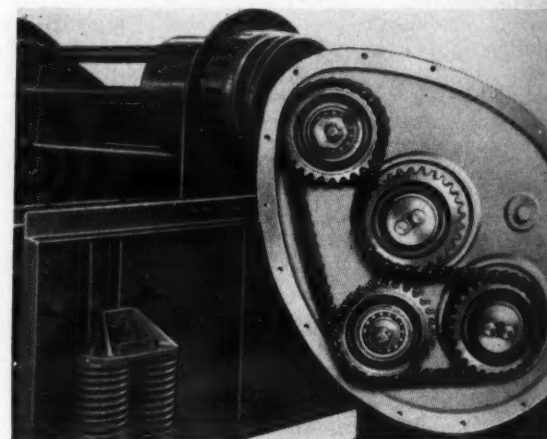
THE EXACT WEIGHT SCALE CO.

31 W. Fifth Ave.

Columbus, Ohio

There is no substitute for Exact Weight.

When inquiring specify CEP6062 — see information request blank, pgs. 2-3



Robins Eliptex Screen with close-up exposed view of the Diamond Roller Chain Transmission.

A Difficult Drive Problem Solved

When designing large Eliptex Screens roller chain type transmission was considered, altho several chain engineers thought the job "to tough". — The DIAMOND Roller Chain system devised, however, has completely solved the problem. This consists of double-strand Diamond Chain, two driver sprockets and an adjustable idler mounted on an eccentric. Two shafts are driven in opposite directions at high speed, each shaft carrying unbalanced weights, the compound centrifugal force giving the screen its elliptical motion. This is but another example of solving unusual drive problems with Diamond Roller Chains. Engineering recommendations are yours for the asking... DIAMOND CHAIN & MFG. CO., 411 Kentucky Avenue, Indianapolis, Indiana.

DIAMOND ROLLER CHAINS

When inquiring specify CEP6063 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

Exactly the Right BLOWER



for
every
furnace, oven
or kiln

No matter what may be the air requirements of your furnaces, ovens or kilns, you will find a suitable turbo blower in the extensive Billmyre line of many models and hundreds of sizes.

The simple, sturdy and durable construction of these efficient units will help to maintain your maximum wartime production by their dependable operations in continuous 24-hour per day duty. No parts are subject to wear, no internal lubrication is required, and their operation is smooth, quiet, and free from pulsation. Write for Bulletin B-4.

Allen Billmyre Corporation, 445 Fayette Ave., Mamaroneck, N. Y.

ALLEN BILLMYRE AIR AND GAS BLOWERS

When inquiring specify CEP6064 — see information request blank, pgs. 2-3

AROUND THE CLOCK
and AROUND THE WORLD
CLARK FORK TRUCKS
ARE WORKING—MOVING
MATERIALS FOR VICTORY



Gas or Battery Powered

Clark "Arms of Steel" carry loads
of 1000 to 7000 lbs.

WRITE TODAY.

CLARK TRUCTRACKER
DIVISION OF CLARK EQUIPMENT COMPANY
BATTLE CREEK, MICHIGAN, U.S.A.

When inquiring specify CEP6065 — see information request blank, pgs. 2-3

NEW LITERATURE

Centrifugal Compressors for Furnace & Pneumatic Tubes

Centrifugal compressors, especially adapted to industrial furnace, conveying and pneumatic tube work are featured in an eighteen-page two color catalog, with heavy-cover for durability and efficient filing. Installation photos in large variety emphasize compact design, accessibility, steel plate construction used in casings and bases, permitting each machine to for the working conditions without being restricted by developments or pattern change. Other features are overhung wheel construction, eliminating two couplings and one bearing. Selection of sizes numbers more than 200. Specifications tables and diagrams, performance curves complete the data. A listing of other products includes suspended speed heaters, centrifugal fans, air washers, drying equipment, draft fans and vacuum cleaners. Catalog 386-2 sent on request.

B. F. STURTEVANT CO., Dept. CEP, Hyde Park, Boston, Mass.

When inquiring specify CEP6066 — see information request blank, pgs. 2-3

Selection and Application of Mounted Wheels

Booklet presents practical data on the use of mounted wheels and accessories for portable tools. Colored illustrations of the products, correct to a few thousandths of an inch, are featured and directions for fitting mounted wheels to the job are listed. Selection guide on use of mounted wheels covers materials and operations. Equipment described includes mounted wheels, steel cutters, special type drills, small wire brushes, and polishing wheels. Catalog is available upon request.

CHICAGO WHEEL & MFG. CO., Dept. CEP, 1101 West Monroe St., Chicago, Ill.

When inquiring specify CEP6067 — see information request blank, pgs. 2-3

Atomic-hydrogen Electrode Holder and Its Operation

Sixteen-page-illustrated bulletin describes in great detail the progressive steps in the adjustment and operation of "the Atomic-hydrogen Electrode Holder." Right and wrong methods of adjusting electrodes and hydrogen supply, striking the arc, controlling the arc length and current setting, starting the weld and other steps are throughout for quick reference. Available on request. treated at length. Bulletin is carefully organized

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

When inquiring specify CEP6068 — see information request blank, pgs. 2-3

Circuit Breaker and Fusible Switchboards

Sixteen-page-revised bulletin illustrates and gives complete detail on circuit breaker and fusible switchboards. Illustrations emphasize features of switchboard frame, enclosing plates and switch unit. Drawings and specifications are given for several types of boards and there are photos of actual installations. Bulletin Sec. 3000 available upon request.

SQUARE D CO., Dept. CEP, 6060 Rivard St., Detroit, Mich.

When inquiring specify CEP6069 — see information request blank, pgs. 2-3

Standard Steels Data Card

A complete combined list of standard steels of the American Iron and Steel Institute and the Society of Automotive Engineers, Inc. has recently been issued as a new Technical Data Card by tube manufacturer. A copy is available upon request. Specify No. TDC-119.

BABCOCK & WILCOX TUBE CO., Dept. CEP, Beaver Falls, Pa.

When inquiring specify CEP6070 — see information request blank, pgs. 2-3

A CHECK-LIST of LIQUIDS

that are being handled
More Efficiently
and at Less Cost by

BLACKMER ROTARY PUMPS

Acids
Acetates
Alcohols
Ammonia
Beer
Bilge water
Bleaches
Brines
Catsup
Caustics
Cream corn
Creosote
Dog food
Dyes
Enamels
Fish oils
Fuel oils
Gasoline
Glucose
Glue
Glycerine
Grape juice
Kerosene
Lacquers
Lard (hot)
Mayonnaise
Mineral oil

Molasses
Oils —
Cooking
Crude
Lube
Vegetable
Naphtha
Paints
Paraffine
Printing ink
Rubber cement
Salad dressing
Shellac
Silicate of soda
Sizings
Soaps
Solvents
Soups
Starches
Syrups
Tan liquor
Tar
Tomatoes
Turpentine
Varnishes
Vinegar
Yeast

Check your requirements on this list and mail it to us
NOW. We will show you how and why —

BLACKMER PUMPS CAN CUT COSTS IN YOUR PLANT.

Prompt Delivery to War Production Plants

POWER PUMPS, 5 to 700 GPM — up to 300 psi
HAND PUMPS, 7 to 25 GPM — 54 models.

Bulletins FREE to Pump Users

No. 301: Facts About Rotary Pumps

No. SER-1: How to Make Pumps Last Longer

Write Blackmer Pump Company, 1841 Century Avenue, Grand Rapids, Michigan



BLACKMER Rotary PUMPS
"BUCKET DESIGN"—SELF-ADJUSTING FOR WEAR

When inquiring specify CEP6071 — see information request blank, pgs. 2-3

NEW LITERATURE

Pumps for Circulating and Processing Applications

Eight-page-two-color catalog gives comprehensive treatment to description of line of pumps designed for clear liquid service. Capacities range from 10 to 500 gpm. Among applications listed are cold, hot, water, brine circulation, air conditioning and sprinkler systems, boiler feeding, pressure boosting, washing machinery and food processing. Construction features include motors registered in motor stands high above floor or mounting stand away from dust, dirt and splash and easy accessibility and small floor space requirements. Additional advantages emphasized in drawings are one stuffing box only required, stock motors quickly adapted by simple machining and assembly operations when regular motor is down. Complete specifications furnished in convenient tables. Catalog D2 available upon request.

ECONOMY PUMPS CO., Dept. CEP,
Hamilton, Ohio.

When inquiring specify CEP6072
— see information request blank, pgs. 2-3

Applications of Wet-Dry Belt Surfacing Equipment

Belt surfacing equipment and its many applications are described in 20-page catalog featuring in addition to the machines, an interesting variety of photos of products surfaced by this method. Utility of wet belt surfacing is explained and such advantages as the elimination of duplicate handling, dust prevention, heat control and savings on jigs and jig fixture costs are emphasized. Units for either wet or dry operation are offered in numerous types, as well as disc and spindle surface type surfacers, shapers, milling machine attachments. A portable belt surfer is also featured. The numerous instances where such equipment is being used include milling machine departments, tool rooms, pattern shops, welding rooms, plastics, assembly departments and maintenance. Catalog No. 624 available upon request.

PORTER-CABLE MACHINE CO., Dept.
CEP, Syracuse, N. Y.

When inquiring specify CEP6073
— see information request blank, pgs. 2-3

For more information on product at right, specify CEP 6074
... see information request blank between pages 2-3.

MEN AGAINST TIME...



A T & M CENTRIFUGALS SAVE TIME AND SPACE

IN ALL MACHINABLE METALS AND COATINGS

A T & M Centrifugal Engineering Gives You The Whip Hand Over Process Time and Floor Space

Time slashed, manpower saved, operations combined or eliminated entirely are now directly resulting from the correct application of centrifugal force in extraction, filtration, dehydration, precipitation and coating processes.

Great advances have been made. A. T. & M. engineers, expanding and adapting the usefulness of centrifugal force, have destroyed old barriers, and built a broad, practical foundation for lowered costs, improved products, wider markets, through better engineered centrifugals.

For instance, one manufacturer, whose process involved the removal of two liquids from a solid, was unable to meet the competition of a substitute product — until A. T. & M. designed and helped plan the installation of special centrifugals which cut $7\frac{3}{4}$ hours from process time.

Another manufacturer, dehydrating crystals by a slow, laborious process, came to A. T. & M. to discover a speedier, alternative method. During preliminary consultation, it became obvious that an ordinary self-discharg-

ing centrifugal basket would not do the job. As a result of painstaking tests, a special centrifugal and framework were devised which not only speeded dehydration but also permitted immediate, conveyor-belt packaging during discharge.

In yet another case, costly after-filtering was eliminated by an A. T. & M.-designed 2-basket centrifugal. Clarification in the whirl of an imperforate inner basket removed the coarser solids. Then, by decanting the liquid over the edge into a perforate outer basket with a filter lining, the finer solids were removed — all in one swift, space-saving machine operation.

Today, A. T. & M.'s engineering service is naturally heavily engaged in the war effort. Yet, with a view to winning the peace as well as the war, our engineers' "know how" is at your firm's disposal for future planning, so far as national needs permit. Write us. We keep strict confidence. Address American Tool and Machine Co., 1425 Hyde Park Avenue, Boston, Mass., or 30D Church Street, N. Y.

A. T. and M.

AMERICAN TOOL AND MACHINE COMPANY

Unit Suggested A T & M. Smooth operation with "out of balance" loads. An A T & M.-designed link guarantees absolute minimum of foundation vibration. Flame-tight covers; spray pipes; specials.



Suggested A T & M. For heavy chemical service. Self-discharging baskets, Twin-Speed Regenerative Drive for entire batteries, positive control — and all other accessories when specified. Laboratory units.



Unit Suggested A T & M. Motors built to A T & M.'s own specifications. Removable baskets, if desired. Cover cannot open while centrifugal is in use. Easily accessible brakes. Outer casing of solid iron or steel.



NEW LITERATURE

Corrosion Resistant Valves

Corrosion resistant valves, their application and the various related problems of selecting and using such equipment are given detailed and practical treatment in a 24-page-bulletin with substantial cover. Among the subject headings of the most important sections are: "Forms of Corrosion," "Corrosives," "Material Selection," "Types of Design," "Accessories," "Chemical Analyses of Various Metals Used." Much of this data is tabulated for convenient reference. A form is provided for submitting information in connection with individual corrosion survey. Bulletin No. 4202 available upon request.

DARLING VALVE & MFG. CO., Dept. CEP, Williamsport, Pa.

When inquiring specify CEP6075
— see information request blank, pgs. 2-3

Data on Steam Hose Selection and Care

Steam hose in a series of standardized sizes to facilitate selection is described in two page bulletin. Included in the selection is "Burst Proof" type for saturated steam pressures up to 200 psi made of reinforcement of wire and asbestos but containing no fabric and other hose of fabric construction for somewhat lower pressures. Flue-Still hose specifications are also given as well maintenance suggestions and hints on attaching couplings. Bulletin 4500 available on request.

B. F. GOODRICH CO., Dept. CEP, Akron, Ohio.

When inquiring specify CEP6076
— see information request blank, pgs. 2-3

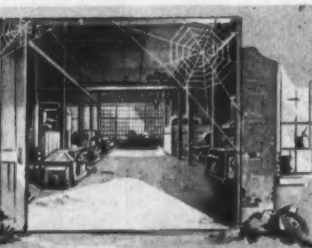
Degreasing Equipment and Chlorinated Solvents

Vapor, immersion, spray and vapor-spray-vapor degreasers are illustrated and fully described in attractive file-size-24-page-catalog. Printed in two-colors heavy processed paper cover. Principles of degreasing methods and the action and properties of solvents are discussed. Various types of installations are pictured and their numerous detailed sectional illustrations. The degreaser line includes a solvent still. Alkali, emulsion and spirits washers and alkali and stripping compounds are also described. Catalog 175 available on request.

DETROIT REX PRODUCTS CO., Dept. CEP, 13005 Hillside Ave., Detroit, Mich.

When inquiring specify CEP6077
— see information request blank, pgs. 2-3

GRIME
does not pay!



WHEN dust and grime are prevalent look out for waste. Don't be lulled into thinking that they are necessary evils. The fact is that they exact a heavy toll, and for that reason should be controlled.

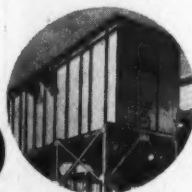
Some dusts are valuable and should be salvaged; some are explosive; others are a health hazard; others affect profits by slowing down production, causing machinery repairs, or by increasing cleaning and painting costs.

If you haven't studied the dust situation in your plant lately, it will pay you to do it now. Our dust control engineers will be glad to help you in every way.

In the meantime, feel free to write us about any of your problems, and make sure that you have our latest literature on High Efficiency dust collecting equipment. We make two types of Dust Collectors: The Dustube cloth bag type and the High Efficiency Cyclone type. Sizes are available for any requirement.

AMERICAN
FOUNDRY EQUIPMENT CO.
573 S. Byrkit St.
Mishawaka, Indiana

AMERICAN
HIGH EFFICIENCY
DUST COLLECTORS



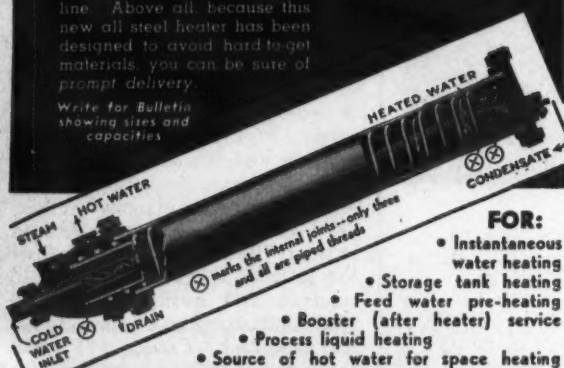
When inquiring specify CEP6078 — see information request blank, pgs. 2-3

Today's HOT WATER ANSWER!

TODAY'S call for speed places heavy demands on existing plant facilities. If lack of hot water keeps getting you in hot water, take a tip from hundreds of operating men and investigate the new Johnson all steel "Instant" Heater.

It's the simplest, quickest, and most economical way to heat water with steam. Like the original Johnson Copper Tube "Instant" Heater, after which it is patterned, it offers a sturdy construction that needs no reducers — hooks right up to your high pressure steam line. Above all, because this new all steel heater has been designed to avoid hard-to-get materials, you can be sure of prompt delivery.

Write for Bulletin showing sizes and capacities



FOR:

- Instantaneous water heating
- Storage tank heating
- Feed water pre-heating
- Booster (after heater) service
- Process liquid heating
- Source of hot water for space heating

Product of The Johnson Corporation

826 WOOD ST. THREE RIVERS, MICHIGAN

When inquiring specify CEP6079 — see information request blank, pgs. 2-3

NEW LITERATURE

New Methods for Degreasing, Decarbonizing Engine Parts In Overhaul Operations

Degreasing and decarbonizing of engine parts for overhaul by special chemicals and newly devised equipment is described in a sixteen-page booklet. While the described equipment and procedure has been designed for use on dismantled aircraft parts it is equally applicable to tractor, diesel, truck and all similar engine parts. The equipment and procedures were developed with the close cooperation of those directly responsible for such maintenance. Complete units are now available for such service. Among the processes and equipment described are an especially designed hot tank chemicals for cleaning steel, aluminum and magnesium parts, degreasing of oil and temperature regulators, chemical and vapor cleaner, air and solvent spray table. Available upon request.

TURCO PRODUCTS, INC., Dept. CEP, 6135 So. Central Ave., Los Angeles, Cal.

When inquiring specify CEP6080 — see information request blank, pgs. 2-3

All Purpose Colloidal Natural Graphite

An all purpose colloidal natural graphite is described in a handy small folder as containing 22% by weight of colloidal natural (not synthetic) graphite dispersed and in complete suspension in water, containing no oil, alkali or chemical and having no effect on rubber. In addition to the water suspended product alcohol, carbon tetrachloride, glycerine, castor oil, penetrating oil and kerosene suspensions are also listed. Price information and a partial tabulation of application of the water suspended product known as "Hydrite" are included. Folder 3 A available upon request.

NATIONAL GRAPHITE CO., INC., Dept. CEP, 17 John St., New York, N. Y.

When inquiring specify CEP6081 — see information request blank, pgs. 2-3

Pump Manual and Operation-Maintenance Data Sheets Grouped in Handy Folder

Series of data sheets on selection, installation, operation and maintenance of all types of industrial pumps for general and specialized services together with an 18-page booklet "Pump Fundamentals" are inclosed in a durable folder for convenient filing. These sheets which are from two to eight pages each include both elementary and advanced technical data. Originally designed for use by the manufacturer's own salesmen their usefulness prompted the release of this material to industry. Sheets include a general trouble check sheet and others as follows: Priming, Hydraulic Data, Pumping Thick Liquids or Semi-Solids, New Pump Vs. Old Pump, Boiler Feeding and Hot Water, Centrifugal Boiler Feed Pumps. "Pump Fundamentals" booklet and selection of sheets in accordance with inquirer's interests are available upon request.

GOULD PUMPS, INC., Dept. 15, Seneca Falls, N. Y.

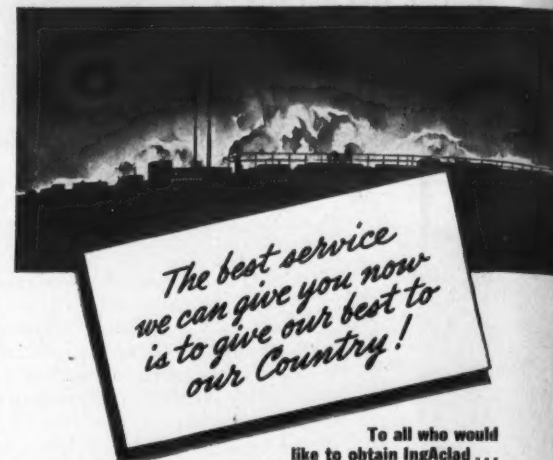
When inquiring specify CEP6082 — see information request blank, pgs. 2-3

Heat Treating Baskets Designed for Maximum Heat Flow and Efficient, Maximum Stacking

Four page bulletin provides valuable data for use in selecting handling baskets. Various types are illustrated and the advantages of open mesh, light weight in increasing heating efficiency are discussed. Unusual stacking convenience and removable bottoms are additional features.

UNION STEEL PRODUCTS CO., Dept. CEP, 40 Pine St., Albion, Mich.

When inquiring specify CEP6083 — see information request blank, pgs. 2-3



The best service we can give you now is to give our best to our Country!

To all who would like to obtain IngAcad...

We are sorry we cannot supply your present needs for IngAcad Stainless-Clad Steel, unless you are in the fortunate position of holding high-rated war orders, but you will be glad to know that every ton you are denied today is serving America in the faster, cleaner manufacturing and handling of Food Products, Chemicals, Textiles, etc.

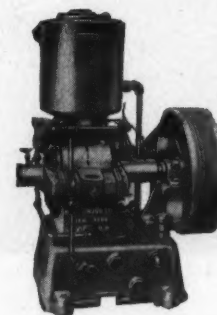
Plan now to take advantage of the economies IngAcad offers when Peace comes.

INGERSOLL STEEL & DISC DIVISION
BORG-WARNER CORPORATION
310 South Michigan Avenue, Chicago, Illinois
Plants: New Castle, Ind.; Chicago, Ill.; Kalamazoo, Mich.

"A Borg-Warner Product"
INGACAD
STAINLESS-CLAD STEEL
AND INGERSOLL SOLID STAINLESS STEEL

When inquiring specify CEP6084 — see information request blank, pgs. 2-3

Cut Processing Time with High Vacuum



Increase Production
Improve Quality
Save Labor and Space
by Using
BEACH-RUSS High Vacuum PUMPS

- BETTER PERFORMANCE
- TOP EFFICIENCY
- FASTER PUMP DOWN
- STEADY, QUIET SERVICE

Get Bulletin 75

BEACH-RUSS COMPANY
40 Church St. New York, N. Y.

Type RP-Rotary Piston Pump.
Capacities 15 to 750 c.f.m.
Operate in micron range-wet or dry vacuum.

BEACH-RUSS Rotary Piston HIGH VACUUM PUMPS

When inquiring specify CEP6085 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW



*These
2 Books*

WILL HELP TO GIVE YOU MORE EFFICIENT DRYING AND BAKING

The information contained in these booklets will prove of timely interest to executives anxious to increase output and at the same time improve quality of their product. Learn how High Temperature Air is being utilized to speed up processing with savings in time, fuel and floor space. Ask for Bulletins 125 and 130. No obligation.

J. O. ROSS ENGINEERING CORPORATION
350 MADISON AVE., NEW YORK, N. Y.
CHICAGO, ILL. DETROIT, MICH.
ROSS ENGINEERING OF CANADA, LTD. Dominion Square Building Montreal

When inquiring specify CEP6080 — see information request blank, pgs. 2-3

STEAM JET EJECTORS

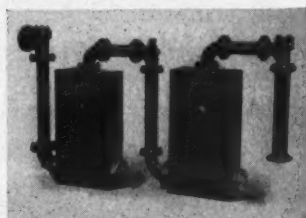


1-stage, 2-element ejector with suction and discharge headers



Steam-jet ejectors are a reliable and efficient means of removing air, gas or vapors from vacuum chambers in industrial processes. Ingersoll-Rand can furnish ejectors for practically any capacity and for vacuums up to one millimeter Hg absolute.

Ask the I-R engineer for details.



(Above) 3-stage ejector with barometric intercondensers

(Left) 2-stage ejector mounted on a barometric intercondenser

Ingersoll-Rand
4-167
11 Broadway, New York, N. Y.

When inquiring specify CEP6087 — see information request blank, pgs. 2-3

NEW LITERATURE

Hydrogenated Rosin and Its Applications

Eight-page-bulletin bound in heavy card stock cover for durability and convenient filing presents physical and chemical properties of "Staybelite Resin," a (hydrogenated rosin) produced from southern pine as set forth in analysis of typical sample. Among applications discussed are use in adhesives, rubber compounding, resin manufacture, paper size, greases, ceramics and soaps. Much of the important data is given in handy chart and graph form. Bulletin available upon request.

HERCULES POWDER CO., Dept. CEP, Wilmington, Del.

When inquiring specify CEP6088 — see information request blank, pgs. 2-3

Metallizing Aids Machine Maintenance

16-page bulletin describes metallizing equipment and the various applications of the process. Tells briefly how various industries are eliminating replacements, increasing service life of equipment. Also explains how metallizing is used to salvage mismatched parts and defective castings and how metallized coatings conserve vital metals. Bulletin 42 A sent on request.

METALLIZING ENGINEERING CO., Dept. CEP, 21-07 41st Ave., Long Island City, N. Y.

When inquiring specify CEP6089 — see information request blank, pgs. 2-3

Ball and Roller Bearing Lubrication

Thirty-two-page lubrication guide devotes chapters to such subjects as functions of lubrication, oil lubrication, recommended viscosities, oil supply systems, oil bath circulating systems, spray or mist lubrication, wick feed, oil with compressed air, grease lubrication, ABEC grease standards, housing with grease fittings, housings without grease fittings, comparative advantages of oil and grease, high temperature applications, minimum friction applications, protections against and instructions for cleaning. Bulletin 266 available on request.

SKF INDUSTRIES, Dept. CEP, Front & Erie Sts., Philadelphia, Pa.

When inquiring specify CEP6090 — see information request blank, pgs. 2-3

Motor Selection Data Bulletin

Twelve-page-two-color file size bulletin contains in handy, tabulated form data on squirrel cage, wound rotor, direct current and synchronous motors. Numerous typical applications are illustrated. Handy speed-torque curves and discussion of engineering phases of motor application such as the recommended use of higher speed motors and adjustable speed are included. Bulletin B-6052-C available on request.

ALLIS-CHALMERS MFG. CO., Dept. CEP, Milwaukee, Wis.

When inquiring specify CEP6091 — see information request blank, pgs. 2-3

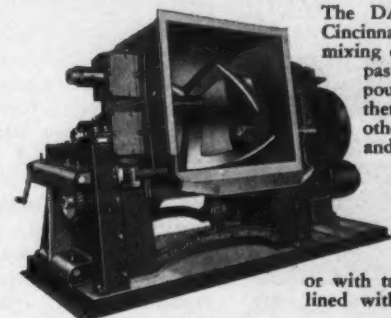
System for Inter-Communication

Eight-page catalog illustrating and describing a diverse line of intercommunicating equipment, including units for both small and large industrial and office installations. Flexibility and various adaptations of the system are explained. Provides a means of communication between a master and one or more sub-stations or a public address system. Catalog available on request.

NATIONAL INTER-COMMUNICATING SYSTEMS, Dept. CEP, 2434 Montrose Ave., Chicago, Ill.

When inquiring specify CEP6092 — see information request blank, pgs. 2-3

DAY----- CINNATUS MIXER



The DAY Heavy Duty Cinnatus Mixer for mixing of storage battery pastes, rubber compounds, clays, synthetic resins, and for other heavy pastes and plastics, and can be furnished in working capacities from 5 to 775 gallons; with or without jacketed tanks; or with tanks made of, or lined with special metals.

PONY MIXER (Gearless Type)

The DAY Balanced Top, Pony Mixer (Gearless Type) for printing inks, paint pigments and other light pastes. The vertical blades revolve while the can rotates in the opposite direction, bringing all parts of the mass under the action of the mixing blades. Stationary scraper blades keep material from accumulating on sides of can.



The top casting is balanced with counter-weights enabling the agitator to be easily tilted. Both the agitator and the can are driven by heavy roller chains. It is built in five sizes having capacities of 40, 50, 75, 100 and 125 gallons.

RO-BALL "Stabilized" GYRATING SCREENS

The DAY Ro-Ball "stabilized" Gyration Screens are built in 14 sizes, providing maximum screening capacity per square foot screen area.

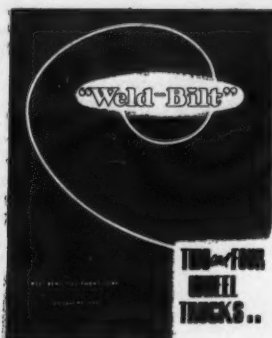


Makes a clean accurate separation of the most difficult material. The DAY Super-Active Ball Cleaning Device insures a clean and open mesh at all times, with from two to five separations.

THE J. H. DAY COMPANY.....
CINNATI-Ohio

When inquiring specify CEP6093 — see information request blank, pgs. 2-3

SEND FOR THIS Complete CATALOG of **WELD-BILT** MATERIALS HANDLING EQUIPMENT



You may find a profitable and economical solution to YOUR materials handling needs in this new book. It covers WELD-BILT Engineered equipment for every phase of industrial handling, moving, stacking storage of wartime materials . . . Standard Equipment for standard tasks, specially engineered equipment for unusual Industrial handling problems . . . PROVEN equipment profitably used in thousands of plants.

★ WRITE FOR YOUR COPY TODAY — Catalog No. 1042 — It will help you to time and production savings!

WEST BEND EQUIPMENT CORPORATION
Materials Handling Engineers
226 S. Water Street • West Bend, Wisconsin
Manufacturers of Portable Electric Elevators, Two-Wheel and Four-Wheel Trucks, Solid Platform, Barrel Racks, Tipping Machines and other material equipment.

When inquiring specify CEP6094 — see information request blank, pgs. 2-3

QUICKER HEATING

- Small Size
- Light Weight
- One Moving Part
- Low Price

OVER 180,000 SOLD

Sold by more than 100 Mill Supply Distributors throughout the U. S. A. See your supply house or write for Catalog T-1737.

YARNALL-WARING CO., 125 Mermaid Ave., Phila.

YARWAY

IMPULSE STEAM TRAP

When inquiring specify CEP6095 — see information request blank, pgs. 2-3

NEW LITERATURE

Steam Sample Degasifier

Four-page-two-color bulletin illustrates and describes steam sample degasifiers. The manner in which this equipment performs two functions is explained. It first thoroughly degasifies the condensed sample of steam so that concentration of solids may be reliably determined by means of a conductivity and second separates gases for analysis so that generation of hydrogen may be quickly detected. The separation of gases is effected without changing the concentration of the sample through evaporation and, as the apparatus operates under positive steam pressure, contamination by inleakage of air is precluded. Use of atomization method of degasification and moderately elevated temperature are employed to provide accurate results. Bulletin 3020 available upon request.

COCHRANE CORP., Dept. CEP, 17th & Allegheny Ave., Philadelphia, Pa.

When inquiring specify CEP6096 — see information request blank, pgs. 2-3

Manual On Care Of Industrial Rubber

Pocket manual of 24-pages gives detailed and practical directions for proper care and maintenance of industrial rubber products such as belts, hose and packing. The text covers many aspects of the subject and can be used with good effect as a check list against servicing practices. Titled, "How to Get Longer Life from Mechanical Rubber Goods." Available on request.

N. Y. BELTING & PACKING CO., Dept. CEP, 1 Market St., Passaic, N. J.

When inquiring specify CEP6097 — see information request blank, pgs. 2-3

Graphite Lubrication Handbook

Handbook — 28-pages discusses in detail the action of natural colloidal graphite, traces the development of the maker's product — a domestic graphite. Some 150 applications are listed and in most cases the lubricating problem is dealt with in detail and recommendations made as to grade of graphite needed, as well as application. There is a listing of some sixteen suspensions. Available upon request.

NASSAU LABORATORIES, Dept. CEP, Hackensack, N. J.

When inquiring specify CEP6098 — see information request blank, pgs. 2-3

Instructions on Best Methods of Cleaning Lathes

Maintenance bulletin, sixteen-pages, 6 x 9 in., presents detailed instructions on how to clean a lathe. Nineteen close-up illustrations emphasize the most important steps in the prescribed sequence of operations in cleaning all the various lathe units. Importance of regular cleaning is stressed as a means of increased production and assuring long life of equipment. This bulletin titled "Keep Your Lathe Clean," is No. H-1. Available upon request.

SOUTH BEND LATHE WORKS, Dept. 9Y, South Bend, Indiana.

When inquiring specify CEP6099 — see information request blank, pgs. 2-3

Tubing and Pipe Protection Methods

Ten page-and-cover bulletin illustrates and describes the application of advanced tubing and pipe protection methods comprising several caps and plugs especially designed for use on hydraulic units; ends of tubing with sealed fittings, threaded male fittings, plain end and beaded tubing and pipe, threaded flush opening. Available upon request.

TUBING-SEAL CAP, INC., Dept. CEP, 215 W. 7th St., Los Angeles, Cal.

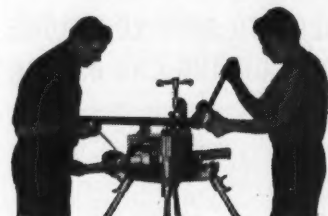
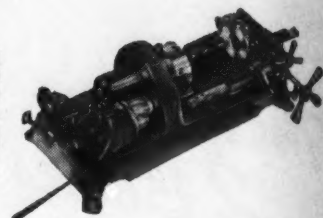
When inquiring specify CEP6100 — see information request blank, pgs. 2-3

The A-B-C of Pipe and Bolt Machines



Beaver Model-A
A high-speed heavy-duty deluxe Pipe and Bolt Machine. Range 1/4 to 2-inch — up to 12-inch with gear tool and drive shaft. Bolts 1/4 to 2-inch. Wt. 415 lbs. Ask for Bulletin-A.

Beaver Model-B
A compact utility Pipe and Bolt Machine combining many features of Model-A with the easy portability of Model-C. Range 1/4 to 2-inch — up to 8-inch with drive shaft and geared tools. Bolts up to 1 1/2-inch. Wt. 280 lbs. Ask for Bulletin-B.



Beaver Model-C
A sturdy little Power Unit. Converts Hand Pipe Tools into Power Tools from 1/4 to 8-inches. Threads 8-inch in 6 minutes. Threads bolts up to 1 1/2-inch. Equipped with automatic chuck wrench selector — a safety feature. Two men can use it at the same time without interference. Easily portable — weighs about 150 lbs. Write for Bulletin-C.

Also — Complete Line of Hand Tools!

BEAVER PIPE TOOLS

143 REVIEW AVE.

WARREN, OHIO

When inquiring specify CEP6101 — see information request blank, pgs. 2-3

"International"

is the name
to REMEMBER when
you want the most MODERN —

MIXING and PROCESSING EQUIPMENT

**PEBBLE and BALL MILLS,
MIXERS, KETTLES —
AUTOClaves, DIGESTERS
BLENDERS — Send for Catalog**

INTERNATIONAL ENGINEERING, INC.

**DAYTON,
OHIO**

When inquiring specify CEP6102 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

LINTERN TRAFFIC SIGNALS



In "laning" traffic at industrial plants Lintern two-light traffic signals help move traffic swiftly and safely (using roadways to best advantage)—signaling use of three lanes in, during early morning rush period, and three lanes out at closing time.

★ For "laning" traffic — at dangerous corners, underpasses and abutments — where signals are vitally needed these busy days in the interests of life and property, Lintern Lanterns offer many advantages.

They are equipped with glass reflectors, hoods and high quality lenses giving a brilliant signal under all conditions.

These lanterns are strongly built of steel, securely welded and cadmium plated for long life. All are equipped with hinged doors for easy lamp changes, and are weatherproof and dustproof.

Supplied for one, two, three or four directions with one, two or three lights — with or without hoods.

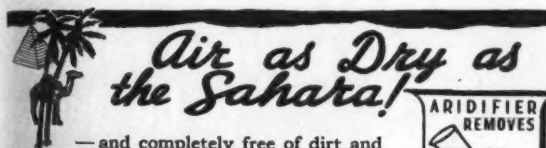
Excellent lanterns, reasonably priced. Ask for catalog E-5.

THE LINTERN CORPORATION

56 Lincoln Avenue

Berea, Ohio

When inquiring specify CEP6103 — see information request blank, pgs. 2-3



— and completely free of dirt and fine scale is supplied your air-driven tools and equipment when you use an Aridifier on your compressed air line.



Aridifiers remove contamination by centrifugal force — four air-driven rotors effect complete removal of air contamination. No elements to replace, no filters to clog, continuous and automatic. They lower tool maintenance costs, keep water out of sprayed finishes, prevent gumming of abrasive blast nozzles, eliminate shut-downs.

Thousands in use in every industry using compressed air and gas. Twenty-one aircraft plants alone use a total of 558 to date. Send for Bulletin 638.

LOGAN ENGINEERING CO.

4900 Lawrence Avenue
Chicago, Illinois

WET DIRTY AIR DRAIN

The ARIDIFIER

Dries and Cleans Compressed Air

When inquiring specify CEP6104 — see information request blank, pgs. 2-3

PRODUCTION

Plastic-Laminated Cloth Aprons

Also sleeves for protection against acid, fire, alkalis and similar hazards



PROTECTIVE CLOTHING
... light, tough and flexible

ply with recommendations of U. S. Department of Public Health.

MILBURN CO., Dept. CEP, 3246 E. Woodbridge Ave., Detroit, Mich.

When inquiring specify CEP6105 — see information request blank, pgs. 2-3

Self-Adjusting Forged Jig Clamps

Slotted aperture, functioning like pliers makes possible great number of adjustments

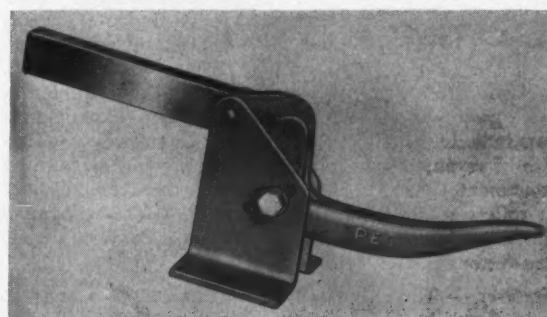
Uses — Designed to be locked in infinite positions up to 15° above or below horizontal.

Features — This clamp has been purposely designed to give it very great range thus making it possible to use a much smaller number of jig clamps as one of these adjustable clamps will do the work of many of the non-adjustable type.

Description — These clamps are of drop-forged construction. In addition to their feature of being self-adjusting, they have a positive lock and are very quick acting. Identified under trade name "Pec." Complete information available upon request.

PRODUCTS ENGINEERING CORP., Dept. CEP, 700 E. Florence Ave., Los Angeles, Cal.

When inquiring specify CEP6106 — see information request blank, pgs. 2-3



JIG CLAMP ... easily locked in number of positions

For War Filtration without limit in

**CAPACITY
RATE
ADAPTABILITY
CONSTRUCTION**

Call it the all-purpose filtration tool — without limit in capacity, nature of material handled, the quality of filtrate or solids to be recovered, resistance of working parts, temperature or pressure of operation. — That's to-day's war-time Shriver Filter Press — built to serve your needs better and faster. The Shriver Filtration Book tell how — get a copy. T. Shriver & Co., 846 Hamilton St., Harrison, N. J.

Shriver

FOR BETTER FILTRATION
FILTER PRESSES

When inquiring specify CEP6107 — see information request blank, pgs. 2-3



SOUTH BEND LATHES
for
Dependable
Accuracy

Batteries of South Bend Lathes have been selected for hundreds of war plants because their dependable accuracy assures continuous trouble-free production hour after hour, day after day. Precision built to retain their accuracy—South Bend Lathes will be easily convertible to peacetime production. Available in five sizes, 9" to 16" swings. Write for catalog.

**"HOW TO RUN
A LATHE"**
A 128-page book on the operation and care of metal working lathes. Size 5 1/4" x 8" — contains 365 clear illustrations. Price 25c postpaid.

SOUTH BEND LATHES
Dept. 285, South Bend, Indiana
LATHE BUILDERS FOR 36 YEARS

When inquiring specify CEP6108 — see information request blank, pgs. 2-3


Call on Benjamin for recommendations on **EXPLOSION PROOF and DUST-TIGHT Lighting Equipment**

Not only from the standpoint of protecting life and property, but also from the standpoint of insuring uninterrupted war production, every precaution must be taken to protect America's War Production against fire, explosion and accidents.


Particularly important are precautionary measures in locations in which explosive vapors or explosive dusts are present. Safe lighting for such locations is one of the vital "musts". For this purpose special types of equipment which meet the requirements of the hazardous locations are needed.

In the solution of these special lighting problems, Benjamin's experience will prove helpful. Benjamin equipment available for this purpose meets all requirements of the National Electrical Code and bears the label of the Underwriters' Laboratories. For further data, address the Benjamin Electric Mfg. Co., Dept. LL, Des Plaines, Ill.


BENJAMIN LIGHTING EQUIPMENT
Distributed Exclusively Through Electrical Wholesalers




BENJAMIN Explosion Proof Lighting Units




BENJAMIN Type II Dust-Tight Units



BENJAMIN Type II G Dust-Tight and Moisture-Proof Units



BENJAMIN Type II G "Vapor-Seal" Lighting Units



BENJAMIN Type II G Sealed-Fluorescent Dust-Tight Units

When Inquiring specify CEP6100 — see information request blank, pgs. 2-3

WHITNEY
Platform Conveyor
CHAINS



Give

"KID-GLOVE HANDLING"
to Valuable Products

This manufacturer's pharmaceutical products get safe, smooth, sanitary handling on level-top Whitney Platform Chains. Breakage is avoided . . . container-bottoms are not soiled. And Whitney Platform Chains are built on standard Whitney alloy-armored-steel Roller Chains . . . to give extra service life under today's non-stop operating conditions.

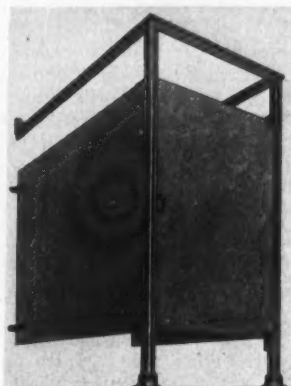
THE WHITNEY CHAIN & MFG. CO., HARTFORD, CONN.

When Inquiring specify CEP6110 — see information request blank, pgs. 2-3

PRODUCTION

All Wood Toilet Compartments

In four types, replacing metal; panels and door of 7-ply - Douglas Fir Plywood



Wood Toilet Compartment

of metal type compartments. Identified as "Sany-metal All-Wood Compartments. Bulletin Number 900 illustrates each of the four types and gives complete specifications so that selections fitting available space may be easily made.

SANYMETAL PRODUCTS CO., Dept. CEP, Cleveland, Ohio

When Inquiring specify CEP6111 — see information request blank, pgs. 2-3

Domestic Production of Synthetic White Sapphire Has Rapid Growth

Made in boules and equals foreign product; supply foreseen as adequate for vast military needs



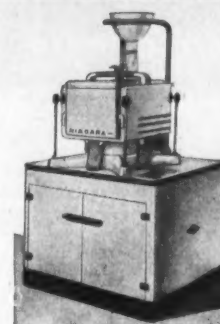
DOMESTIC SAPPHIRE BOULES . . .
200 carat, (left) - 350 carat (right)

In such instruments they are employed in the form of ring bearings of V-type and cup-type end bearings. Experimental uses indicate their suitability for thread guides in manufacture of rayon, as orifices for flow meters and oil burning equipment, as insulators in gas-filled or thermionic devices, as rollers for small needle bearings and for cutting tool tips to perform high speed finishing operations on certain non-ferrous metal.

Features — The material, as now made, attains a high degree of quality, and imperfections being so microscopic that no effect on qualities of precision bearing surfaces and

Uses — As a substitute for metal type compartments that are now generally unavailable. Closely resemble the maker's previous metal type in appearance, design and specifications.

Description — Made in four standard types, replacing and resembling the metal compartments formerly made. Partition panels and doors are made of 7-ply Douglas Fir Plywood. They are easily installed and are very practical as additions to replacements



GYRO-LAB-SIFTER

PATENTED

For Continuous Flow — or Limit Tests

Gyro-Lab is ideal for smaller capacity requirements, 2 to 250 mesh; two or three separations, for handling

Chemicals — Powders — Grains, etc.

Built for constant feeding, continuous 24-hour-per-day operation.

With only an extra set of screens, machine can be converted in a few minutes to a **LIMIT TEST SIFTER**, for percentage and weight analysis. Up to 9 gradings in one operation.

Richmond Mfg. Co.

LOCKPORT, N. Y. | MFGR'S. — HIGH-SPEED GYRATORY SIFTERS, PERMAFLUX MAGNETS, ETC.

When Inquiring specify CEP6112 — see information request blank, pgs. 2-3

Is YOUR Future to be Read in a Drop of Water?



If your manufacturing processes, or packaging, or handling, or storage of products depend on accurate, uniform moisture control, you'll want to investigate KATHABAR.

Scores of Kathabar Moisture Control Systems are in use in chemical and food plants.

You may be especially interested in the new Kathabar "package unit," if you need a humidity control system of limited capacity—from 750 to 5000 c.f.m. It is available now.

[WRITE for free bulletin describing this new KATHABAR package unit.]

SURFACE COMBUSTION • TOLEDO, OHIO

Kathabar
SC
CONTROLLED ATMOSPHERES

When Inquiring specify CEP6113 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

DATA ON DOPP-TYPE POSITIVE-SCRAPING

Discussion No. 3 gives information on heating and cooling liquid and viscous materials with and without scraping. Applications checked by tests include saving 42% of the time for sulfonating, replacing a battery of Xanthate mixers by a single Dopp, drying in one Dopp instead of seven other units, etc. As your first step toward your making savings with Dopps, let us send you our Discussion No. 3.



Dopp Experimental Dept. where, without charge or obligation, you can try different mixers under pressure or vacuum and at different speeds, heat by steam at up to 150 lbs., cool with water or brine, etc.

These facilities may speed up your change to war-time products.

DOPP KETTLES
CAST • SEAMLESS • SCRAPPED
MADE TRUE • STAY TRUE

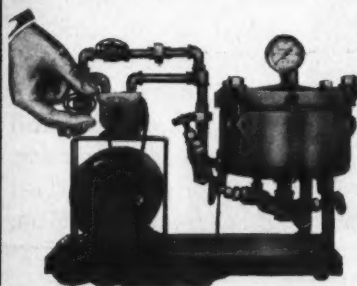
SOWERS MANUFACTURING CO.
1301 NIAGARA ST., BUFFALO, N. Y.

When inquiring specify CEP6114 — see information request blank, pgs. 2-3

GET THE MOST! From Your Liquids.

REFINE, CLARIFY and RESTORE them with SPARKLER HORIZONTAL PLATE FILTERS

Whether your filtering job involves the lightest chemicals or the heaviest waxes, there's a Sparkler designed especially for your particular product.



A series of horizontal plates are clamped together with filter paper between, making cleaning and changing easy. All types of filteraids, bleaching clays and diatomaceous earths are exceptionally effective.

Sparkler Filters can be reset or changed in less than three minutes. They have plenty of cake space, are simple to operate, inexpensive to own and maintain. Capacities 1 pint to

10,000 G.P.H. We will gladly demonstrate the Sparkler in your own laboratory, or send us sample of your unfiltered product for test.

SPARKLER MANUFACTURING CO.

244 Lake Street

MUNDELEIN, ILLINOIS

SPARKLER FILTERS
WITH THE HORIZONTAL PLATES

When inquiring specify CEP6115 — see information request blank, pgs. 2-3

PRODUCTION

other parts. The boules each weigh at least 150 carats, contributing to standardization of cutting and sawing procedures. Recently larger boules up to 350 carats, (illustrated) 2 3/4 in. long, have been produced.

Description — Mineralogically, the hardness of the American white sapphire is exceeded only by the diamond. Once cut, these jewels are surprisingly tough in terms of resistance to breakage and impact. Melting point of over 3700 degrees F. Complete chemical inactivity when exposed to various types of corrosion except strong mineral acids and alkalis may suggest uses to makers of chemical equipment. Further information is available upon request.

LINDE AIR PRODUCTS CO., Dept. CEP, 30 E. 42nd St., New York, N. Y.

When inquiring specify CEP6116 — see information request blank, pgs. 2-3

Blackout Ventilators Bar Rays of Interior Light, Non-Reflecting

Available in exhaust, supply and tempering types; used singly or in multiple

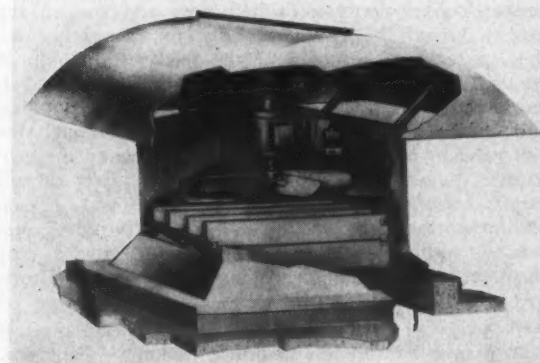
Uses — Series of ventilators especially designed for use of war and other plants that must be prepared to observe all blackout precautions such as avoiding transmission and reflection of illumination from interior through ventilators.

Features — Light weight. Need no protective housing or elaborate roof supports. Flexibility of operation. Low initial cost and small power consumption.

Description — Made in three types: exhaust, supply and tempering. The first two have sturdy housings with hinged hoods, efficient fan and motor; easy moving dampner; internal electric connections and controls. Casting made of heavy gauge black iron. Painted inside and out with lusterless black enamel to meet blackout specifications. Hinged hood provides easy access to moving parts. Third type, the tempering units are similar in construction but with the addition of tempering section located below roof under air intake. Face and by-pass dampners, operated by modulating dampner motor, controlled by thermostat, to regulate air temperature. Steel heating coils are located on each side of the by-pass. Each type available in units of 10,000, 15,000 and 20,000 cfm capacities. May be used singly or in multiple. Descriptive bulletin 27 UST 1 available on request.

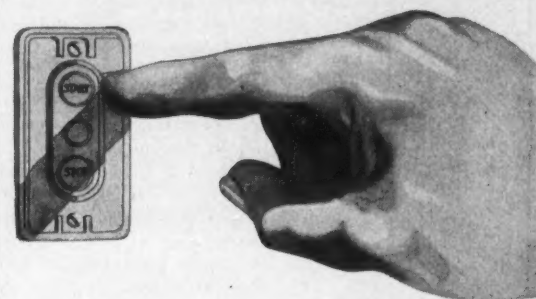
CARRIER CORP., Dept. CEP, Syracuse, N. Y.

When inquiring specify CEP6117 — see information request blank, pgs. 2-3



BLACKOUT TYPE VENTILATOR . . hides interior light

Just Press a Button..



LINCOLN CENTRO-MATIC LUBRICATING SYSTEM

makes it possible to lubricate every bearing on a machine instantly and automatically by simply pressing a switch button

Do you, as a manufacturer in the chemical field, *know* what a Lincoln Centro-Matic Lubricating System can do for your company? If not, it will pay you to make inquiries.

The installation of a Centro-Matic System does away with the need of having a man contact each bearing to be lubricated. It also eliminates the dangers of manually greasing bearings located behind gears, pulleys, spindles, etc., and other places which are hard to reach.

This modern Lincoln method of centralized lubrication assures greater safety and economy, and permits machines to run continuously without "time out" for lubrication. Great savings are effected in man-hours and machine-hours.

A Centro-Matic System consists of a number of Centro-Matic Injectors—one for each bearing—and a hand-operated or a power-operated Centro-Matic Lubricant Pump. A power-operated system can be semi-automatic (just press a button), or it can be full automatic. The injectors can be grouped in manifold or located separately at each bearing. In either arrangement only a single lubricant supply line is required.

Easily installed on new or old machines, or on a series of machines. Please write for Bulletin 888-F, and send us blueprints of the machines you plan to lubricate. Our engineers will gladly make recommendations.



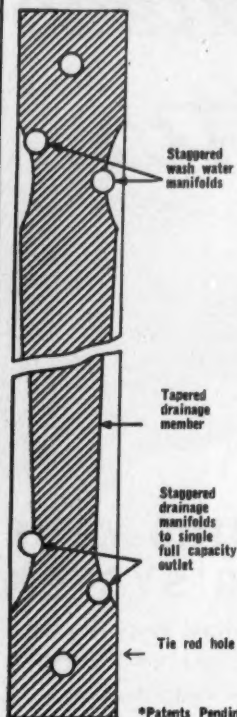
ARMY-NAVY PRODUCTION AWARD
for high achievement in the production of war equipment has been conferred upon the Lincoln Engineering Company. It serves as inspiration toward greater and greater accomplishment until the time of final and complete Victory.

142-4

LINCOLN ENGINEERING COMPANY
PIONEER BUILDERS OF LUBRICATING EQUIPMENT
ST. LOUIS, MO.

When inquiring specify CEP6118 — see information request blank, pgs. 2-3

INCREASE FILTER PRESS CAPACITY without adding filter units



ARE your filter presses "Hitting on all plates?" Or are you shy of that capacity you need to get out the production? Here's how you can increase press capacity without adding to the number of units: buy F-M FREEFLOW FILTER PLATES! The reason? The drainage channels are tapered; that is they increase in depth from top to bottom, thus providing the extra space needed for the filtrate as it pours along the channels.

Sizes fit all standard presses. Materials of construction include long leaf yellow pine, cypress, maple and Bakelite.

Filter Media Corp.

Irvington-on-Hudson, N. Y.

*Patents Pending Chicago Salt Lake City 1-FM-2

When inquiring specify CEP6119 — see information request blank, pgs. 2-3

Put Electric Heat Right Where You Want It with

G-E Heating Cable

You can fit this flexible, lead-covered heating cable into almost any job up to 165 F. It can't be beat for keeping sprinkler valves, pipe lines, downspouts, gutters, and similar places free of ice.

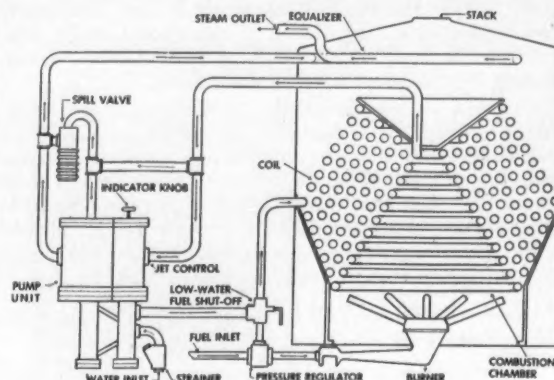
For 110-volt circuits, use a 60-ft., 400-watt assembly; price \$4.50. For 220-volt circuits, use 120-ft., 800-watt assembly; price \$8.50. Order from nearest G-E office or direct from General Electric, Schenectady, N. Y.



GENERAL ELECTRIC

When inquiring specify CEP6120 — see information request blank, pgs. 2-3

PRODUCTION



STEAM GENERATOR . . with fire box integral part of coil . . jet control system

Steam Generator Needs Only Fuel, Water for Automatic Operation

Furnishes feed water without thermostats, motor driven pumps, compact, explosion proof

Uses — For use in a wide variety of steam and heating applications, this generator has been especially designed to achieve compactness and economical performance.

Features — Entire unit has only three working parts. The firebox is eliminated, no pit is required. No electrical connections need be installed. Lubrication, bearings, belts eliminated. Only fuel and water needed for automatic operation, a new principle of water feeding, incorporating Jet Control, — automatically and without the use of thermostats and motor driven pumps, — furnishes feed water in direct proportion to the amount drawn off as steam. Once the generator has been lighted, — burners are provided for either gas or fuel oil, — it is completely operated by the steam throttle valve or load. Quiet. Vibrationless. Person without previous steam boiler experience can operate it.

Operation — The Jet is the control. It is located in the feed water pump at the point of inlet where the generator coil connects with the pump. When the steam generator is started cold the coils are full of water. The velocity of water through this jet is very low consequently the feed water pump operates very slowly. As the steam is generated in the coils both steam and free moisture pass through the jet. The velocity increases and the speed of the feed water pump increases proportionately to supply the coils with water. When steam has increased and free moisture content decreased to the proper quality steam, the velocity through the jet automatically and inherently functions to regulate the speed of the feed water pump to maintain the generator unit in proper heat and water balance at all times. The surplus steam that does not pass through the jet, (a fixed orifice) is routed through the spill valve by-pass. During the operating period the generator is completely operated by the throttle valve. It will start and stop the entire unit without any further regulation or control. The amount of load or "throttle" automatically regulates the volume of steam generated, — the steam pressure is automatically maintained by a pressure-operated fuel regulator.

Performance — Develops 150 pounds of steam pressure from a cold start in less than five minutes. Explosion-proof. Design eliminates extended steam pressure chambers. Coils are tested to a hydraulic pressure of 1000



TO MEET WAR PRODUCTION NEEDS

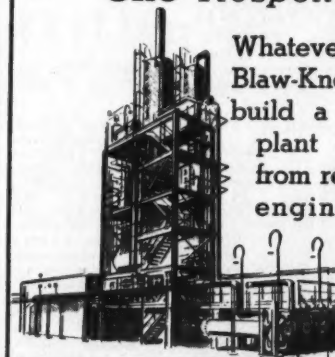
Jeffrey Miracle Hammer Crusher . . a big primary reduction unit for a big job in war-production plants where critical materials such as carbide, chemicals, etc., must be reduced in a hurry to desired size. Large feed opening — massive construction — built for the tough jobs. Jeffrey crushers and pulverizers meet new demands for a sized product . . a size and type machine for each reduction problem.



The Jeffrey Manufacturing Company
853-99 North Fourth St., Columbus, Ohio

When inquiring specify CEP6121 — see information request blank, pgs. 2-3

PROCESS PLANTS from idea to Operation One Responsibility



Whatever your process—Blaw-Knox is ready to build a complete new plant or an addition from research through engineering, fabrication and construction, to initial operation.

Complete plants or equipment for the following processes . . .

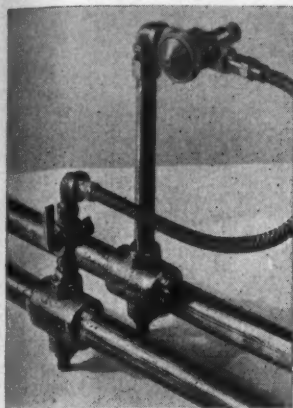
Distillation	Kilning and	Organic Synthesis
Gas Absorption	Calcining	Emulsification
Solvent Extraction	Polymerising	High Pressure
Solvent Recovery	Evaporation	Processing
Heat Transfer	Crystallisation	Impregnating
Furnacing	Drying	Gas Cleaning
Cracking	Mixing and Stirring	and others

BLAW-KNOX DIVISION OF BLAW-KNOX CO.

FARMERS BANK BLDG., PITTSBURGH, PA.
Offices in Principal Cities

When inquiring specify CEP6122 — see information request blank, pgs. 2-3

THIS HUMIDIFYING SYSTEM SAVES THREE WAYS - -



ON PRODUCTION

because it keeps plant humidity within narrow limits over a wide range of operating conditions, reduces rejection losses. Precision built spray heads produce a uniform, finely atomized spray, completely absorbed by the atmosphere.

ON INSTALLATION

because any plant engineer can install, adjust, and start it up. Once the simple control is set, the system operates continuously, automatically.

ON MAINTENANCE

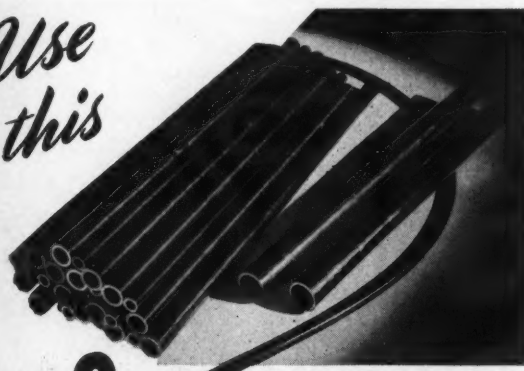
because the spray heads are protected from clogging. There is no expensive duct work, no complicated controls to require attention. Get the complete facts on these low cost systems.



Write for Bulletin HE-100
SPRAY ENGINEERING CO.
113 Central Street Somerville, Mass.

When inquiring specify CEP6123 — see information request blank, pgs. 2-3

Use
this



SARAN* PIPE For Handling Corrosive Chemicals

Saran offers ample tensile strength, resistance to pressure, abrasion, heat (to 175°), acids and alkalis. Offers actual advantages for many jobs formerly using hard rubber, stainless steel and special chemical pipe.

Our engineers have worked with Dow technicians on Saran applications—can tell you quickly how Saran meets your requirements. Available in sizes 1/2" to 2". Easily welded in 1 minute. Write us today.



ACADIA SYNTHETIC PRODUCTS DIVISION
WESTERN FELT WORKS
4039 Ogden Ave. Chicago, Illinois
Branch Offices in Principal Cities

Making
Fittings
Sheets
Compression
Molded
Parts

*Licensees
of the Dow
Chemical Co.

When inquiring specify CEP6124 — see information request blank, pgs. 2-3

PRODUCTION

pounds. Safety valve relieves pressures in excess of 175 pounds per square inch.

Description — The generator coil unit consists of a single continuous coil of overlapping spirals spaced to form a baffled heat passage for maximum heat transfer. The generator is so designed that the firebox is an integral part of the generator coil. Ready accessibility to functioning parts — all are located outside the generator shell. Feed water pump (simplex type) is fully inclosed therefore an indicator is installed on pump so the operation of the unit can be determined from a short distance. Mechanically operated low water fuel shut off valve, actuated by water flow only, cuts off fuel to burner in event of water failure. Generators now produced in 5, 10, and 15 HP sizes and sizes up to 70 HP will soon be available. Special burner and regulator for use with propane and butane gas at extra cost. Descriptive literature available on request.

SUPER MOLD CORP. OF CALIFORNIA, Dept. CEP,
452 No. Sacramento St., Lodi, Cal.

When inquiring specify CEP6125 — see information request blank, pgs. 2-3

Feeder Eliminates Packing Glands, Mechanically Actuated Diaphragms

Avoids corrosion of operating parts; contamination of product; size range from 10 cc. to 400 g.p.h.

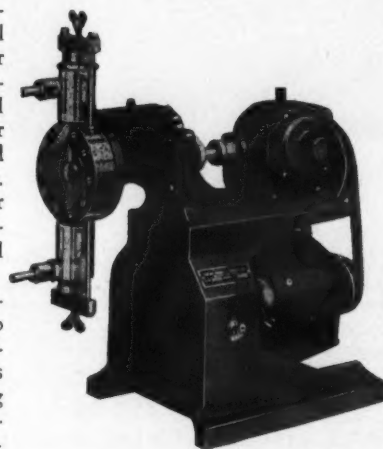
Uses — For injecting chemical solutions under pressure or vacuum in chemical processing, water treatment and food processing. May be used for feeding practically any chemical solution.

Features — Although this pump is of the reciprocating type it has no packing glands or mechanically actuated diaphragms. The separation between the operating fluid and the chemical solution being pumped is either a flat diaphragm of practically any material or a tubular diaphragm. Corrosion of operating parts, contamination of product being fed and waste of material eliminated. In some cases danger of leakage is also avoided.

Description — This apparatus is a positive displacement pump type chemical feeder available in single, duplex, triplex or quadruplex reagent heads, all controlled by a single electric motor and gear reduction element. Each pump is independently adjustable by means of a micrometer stroke control. The chemical solution being pumped is isolated from any operating parts. Feeder available in range of sizes from as low as 10 cc per hour up to 400 g.p.h.. Descriptive literature concerning this equipment known as "Pulsafeeder," available on request.

WILSON CHEMICAL FEEDERS, Dept. CEP, 205
Clinton St., Buffalo, N. Y.

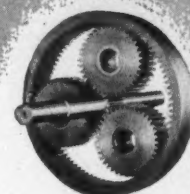
When inquiring specify CEP6126 — see information request blank, pgs. 2-3



CHEMICAL FEEDER . . isolates solution being pumped from working parts

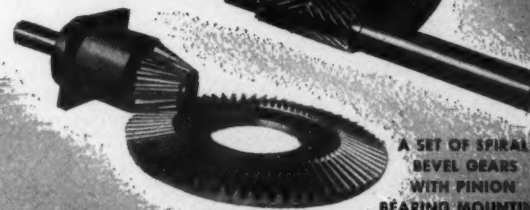
★ "General GEAR" ★
IS A FIGHTER TOO... ★

He's the guy that makes the Jeeps Jump... He's also the BIG-WORKS in the tank, battleship or airplane... in fact he's the BIG-WORKS in any Power-saving or Power-driving machinery. HE'S GOTTA BE GOOD. Our organization of many years of Gear Making Experience is going to keep him fighting and to help keep all of us on top.



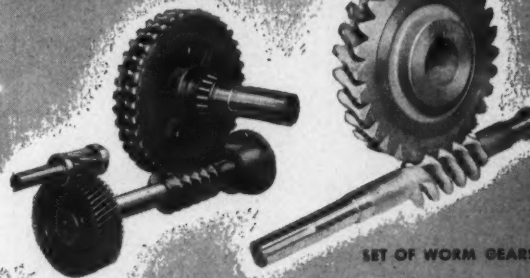
A SET OF
PLANETARY GEARS

CONTINUOUS-TOOTH
HERRINGBONE
GEAR AND PINION



A SET OF SPIRAL
BEVEL GEARS
WITH PINION
BEARING MOUNTING

GEAR ASSEMBLY FOR HELICAL
WORM GEAR SPEED REDUCER



SET OF WORM GEARS

D.O. James
MANUFACTURING COMPANY

1120 W. MONROE ST. (Established 1886) CHICAGO, ILL.

MAKERS OF EVERY TYPE OF GEAR AND GEAR REDUCER

When inquiring specify CEP6127 — see information request blank, pgs. 2-3

PROTECT Your Processing Equipment SAVE Your Machines

CORRECT MISALIGNMENT — insure smooth, even power flow for perfect product — save interruptions, and wear of equipment with

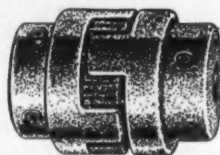
L-R Flexible Couplings

Absorb starting torque, vibration, fluctuation, intermittent overload. *Special Load Cushions* for resistance to chemicals, gases, fumes, heat.

L-R Type "IA"

Pat. and Pat. Pending.

For agitators, mixers, pumps, processing equipment. Bore $\frac{1}{2}$ " to $2\frac{1}{2}$ " for 1/6 to 40 H.P., at 1750 R.P.M.



Quick Selection of the Right Coupling
Easy-finding Selector Charts come free with L-R Coupling Catalog. There is an L-R Coupling for every purpose to 2500 H.P. Write.

Lovejoy Flexible Coupling Co.

4976 W. Lake St.

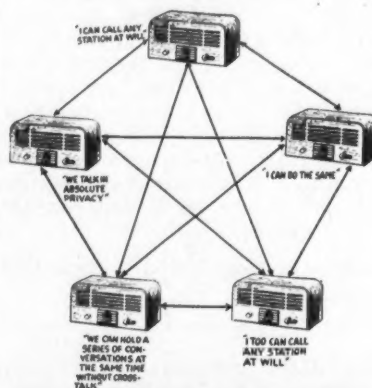
Chicago, Ill.



When Inquiring specify CEP6128 — see information request blank, pgs. 2-3

PRODUCTION

All Master Station System For
Private Two Station Contacts
*Optional earphone eliminates talk-listen switch,
systems can comprise any number of stations*



Talk-A-Phone



MASTER STATIONS . . used in any number for communication

phone is adjustable. Masters can call one another regardless of whether station being called has power "on" or not. *Description* — All master system comprising 2, 10, 20, 30 or more stations. Units have amplifier of super sensitive design which delivers maximum output of $2\frac{1}{4}$ watts and permits operation with undiminished power and efficiency with the units as far as 3000 feet from one another.

TALK-A-PHONE MFG. CO., Dept. CEP, 1219 Van Buren St., Chicago, Ill.

When Inquiring specify CEP6130 — see information request blank, pgs. 2-3

Luminous Signs Activated by Any Light Provide for Emergencies

Visible in dark, contributes to safety during power failures or blackouts

Uses — These signs serve the dual purpose of meeting conventional sign requirements and also providing visibility when lights are extinguished as they continue to glow with their own brilliance. Wide application in industrial and business organizations to make directional, warning and identification signs visible in darkness caused by power failure, emergencies or blackouts.

Features — They are recharged whenever they are exposed to light — day light, electric — either incandescent or fluorescent. Visible within all practical interior or exterior distances — fading to become invisible at about 500 feet. *Description* — Continually recharged whenever they are exposed to light. Exposed for 15 minutes to 10 watt bulb

Uses — This new system made up exclusively of master stations and permits a number of two way conversations to be held simultaneously without "cross-talk."

Features — System is designed to provide complete privacy to the extent that when two people are speaking a third party cannot "listen-in" to either conversation. Optional privacy earphone eliminates use of talk-listen switch and permits operation of unit like a telephone. Volume for ear-

Sta-Warm PORCELAIN-LINED ELECTRIC HEATER *Fills a War-Time Need*



NOTEWORTHY FEATURES

- ★ Selective Temperature Control
- ★ Convenient Pouring Lip

Compounds and materials that attack metals can be as effectively heated and melted in this porcelain-lined Sta-Warm as in a stainless steel unit — which is out for the duration. Variable thermostatic control brings the temperature to any desired setting and holds it constant and uniform. Low concentration and even distribution of heat protects material. This improved Sta-Warm unit is highly efficient, economical to operate, and convenient to use. Made in sizes from $\frac{1}{2}$ to 17 gallons. Tell us the material and conditions to be met and let Sta-Warm engineers advise with you.

STA-WARM ELECTRIC CO.
999 N. CHESTNUT ST. • RAVENNA, OHIO

When Inquiring specify CEP6131 — see information request blank, pgs. 2-3

Save MAN- POWER with DRACCO PNEUMATIC CONVEYORS



If your production calls for moving chemicals or granular materials from receiving point to storage, from storage to point of operation, why not consider the MANY advantages offered by DRACCO Pneumatic Conveyors? One very important feature is the saving of man-power. In many installations a DRACCO Pneumatic Conveyor with ONE man is now doing the work that formerly required SEVERAL men. DRACCO Engineers have reduced handling costs for many — why not consult them about your problem?

Write for Bulletin No. 526

DRACCO CORPORATION

Successors to The Dust Recovering & Conveying Co.

4060 East 116th Street, Cleveland, Ohio New York Office: 130 West 42nd Street

PNEUMATIC CONVEYORS • DUST COLLECTORS

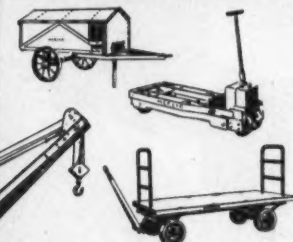
When Inquiring specify CEP6132 — see information request blank, pgs. 2-3

MERCER

"THE NAME THAT CARRIES WEIGHT"

Industrial MATERIAL HANDLING EQUIPMENT

Lift & Trailer Trucks
Carts & Tool Wagons
Belt Conveyors
Elevators
Wheel Tractor Cranes
that lift and carry
3, 5 or 7 ton loads



Shown here are groups of Mercer units now in the field. Some are standard Mercer equipment—others are specially engineered—all are planned to best handle heavy jobs. So—if you're a handling problem—call on Mercer for a lift!

MERCER ENGINEERING WORKS, INC.

Works:
CLIFTON (ALLWOOD), N.J.

Sales Office:
30 CHURCH STREET, NEW YORK
Export Office: 30 Broad St., New York

When Inquiring specify CEP6129 — see information request blank, pgs. 2-3

PRODUCTION

sign will glow for approximately five hours after all source of light is taken away. Red light also activates signs but requires rather longer exposure. Available in a wide variety of the most frequently required signs such as fire escape, elevator, stairway, exit, switch, etc. Air raid signs are also available and special ones are made to order. Descriptive folder on request.

CARDY-LUNDMARK CO., Dept. CEP, 1801 Byron St., Chicago, Ill.

When inquiring specify CEP6135 — see information request blank, pgs. 2-3

Sound-Slide Films for First Aid Training of Industrial Workers

Designed to quickly provide a number of employees with practical fundamentals of emergency care



CARRYING KIT holds films, records, booklets for First Aid course

Uses — To accelerate First Aid training in industrial plants so that there will be an adequate number of employees in all departments who have an understanding of the fundamentals of First Aid procedure.

Features — An average employee, who has once taken this course, can easily conduct a class, as complete lectures are on records, which

together with film, may be used on any regular slide-film sound projector. These projectors are simple in operation. Films, records, printed lessons and instructor's manual all packed in convenient kit.

Description — Selection of twenty films, providing clear and comprehensive treatment of the various important subjects. Two films are in color. Length varies from thirty-one to seventy-seven views. Complete lectures supplementing the films are contained on thirteen records. In addition, there are fourteen lesson guides and an instructor's manual. The basic material for the visualized part of the course is official. Full information regarding these kits available upon request.

JAM HANDY ORGANIZATION, Dept. CEP, 2900 East Grand Blvd., Detroit, Mich.

When inquiring specify CEP6136 — see information request blank, pgs. 2-3



SLIDE-SOUND FILMS . . quick, easy way to industrial group First Aid Training



DURAMETALLIC Packings

FOR LONG UNINTERRUPTED RUNS

NOW — MORE THAN EVER —

our war effort requires that every pump be kept working to capacity without hindrance of shut-down or wear. Good packings are important! That is why so many users "Keep 'em Pumping" with DURAMETALLIC.

FREE ENGINEERING SERVICE ON YOUR PACKING PROBLEMS



When inquiring specify CEP6133 — see information request blank, pgs. 2-3

SAYS "WHEN"

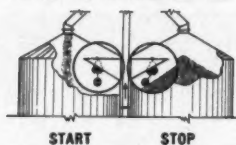
Automatically

● When the desired level is reached in bins, hoppers, tanks, etc. this inexpensive device automatically causes a sealed mercury switch to cut off power or flow. It is known among handlers of coal, grain or other bulk materials and liquid as

The TELLEVEL

They use it to start or stop conveyors, operate feed valves, or perform other operations. A rising level will tip the hanging ball and break the electric circuit... a falling level leaves Tellevel hanging straight, and turns the current on.

Investigate Tellevel applications for your work. Nothing is wear out or fail. Write for descriptive Bulletin 440.



START

STOP



STEPHENS-ADAMSON MFG. CO.

Tellevel — Bin Level Controls Car Loaders SealMaster Ball Bearings Car Pullers Winches ChangeMaster Variable Speed Reducers Saco Speed Reducers

11 RIDGEWAY AVE., AURORA, ILL.

When inquiring specify CEP6134 — see information request blank, pgs. 2-3

THE MOST VERSATILE MILL

with the SIMPLEST ROTOR AND STATOR IN THE WORLD

If yours is a colloidal product—no matter what—it can be processed simply and economically in a Premier Colloid Mill. Every Premier Colloid Mill is a gravity flow vertical colloid mill for continuous production. Yet pressure feed can be applied to every Premier Colloid Mill.

Every Premier Colloid Mill has only one moving member — the rotor. This rotor and its accompanying stator are the simplest in the world. There are no teeth or complicating mechanisms.

If you are manufacturing a colloidal product, investigate the

PREMIER COLLOID MILL

SOME OF THE PRODUCTS WHICH CAN BE IMPROVED WITH THE PREMIER COLLOID MILL

INKS • METALLIC PASTE • PAINTS
CERAMIC COLORS • COSMETICS
RESIN EMULSIONS • GLASS COATING
ING • RUBBER COMPOUNDS • PAPER
COATING • LEATHER DRESSINGS
FLOOR COVERING • ASPHALT
EMULSIONS • DESSERT PREPARATIONS
INSECTICIDE EMULSIONS
CAN SEALING COMPOUNDS
ESSENTIAL OIL EMULSIONS
PHARMACEUTICAL EMULSIONS

FREE . . . a copy of our new booklet, C-1 "Better Products—More Profitably Processed", will be sent upon request.

Premier Colloid Mills



PREMIER MILL CORP.

218 Genesee Street • Geneva, New York
New York Sales Office: 110 East 42nd Street, New York



When inquiring specify CEP6137 — see information request blank, pgs. 2-3

CALCIUM CHLORIDE

**was a difficult product
to pack in paper bags!**

Packaged at approximately 205° F. . . so hygroscopic that moderate moisture cakes it . . . so deliquescent that excessive moisture sends it into solution . . . calcium chloride has long been delivered dry and free-flowing in 100 lb. Multiwall Paper Bags. Custom-built to meet CaCl_2 requirements, these St. Regis Bags, durable, moisture-resistant, and economical, replaced expensive, bulky-to-store steel drums.

You may have a packaging problem for which paper may seem as far-fetched as it appeared to be for calcium chloride and many other chemicals. Perhaps our engineers can help you?

St. Regis

MULTIWALL
PAPER BAGS

MULTIPLY PROTECTION • MULTIPLY SALEABILITY
ST. REGIS PAPER COMPANY
NEW YORK: 230 Park Avenue
CHICAGO: 230 No. Michigan Ave.
OFFICES IN PRINCIPAL CITIES

When inquiring specify CEP6138 — see information request blank, pgs. 2-3

CLEAR YOUR DECKS for PRODUCTION!

Above all, in this war of materials, PRODUCTION will be a vital factor in 1943. Clear out all unneeded and surplus equipment. Let us re-allocate it doing war work.

Conversely, you can better your production by immediate delivery of good REBUILT EQUIPMENT, guaranteed to equal new unit performance.

OUTSTANDING UNITS IN STOCK . .

- 2 Sweetland Filters; Nos. 7 and 10
- 3 Lancaster type; 9 cu. ft. Mixer with motor
- 3 Broughton Mixers; 1000 lb. and 2000 lb.
- 2 Lab. Heavy Duty Mixers (1 qt.) Jktd. and Unjktd.
- 1 W. & P. Jktd. Vac. 150 gal. Heavy Duty Mixer
- 1 W. & P. 250 gal. Unjacketed Mixer
- 1 40 gal. Pony Mixer; 6-15 gal.; 2-8 gal.
- 4 Rotex Sifters; 40" x 84"; belt driven
- 2 Cast Stone Acid Tanks; 600 gal. ea.; rectangular
- 1 Glass Lined 1250 gal. oval truck type Tank
- 1 Glass Lined 2000 gal. Jktd. and Agitated Hor. Tank
- 6 Buhr stone lined 6' x 6' Pebble Mills
- 7 Rotary Kilns; 7'6" x 60'; 1" steel plate
- 12 Cast Steel 1000 gal. Jacketed, Agitated Kettles
- 2 Cast Iron Agit. Jktd. Va. Pans; 3' x 5'6"
- 2 Louisville 6' x 35' Steam Tube Dryers
- 1 Rotary Digester; 6' x 15'

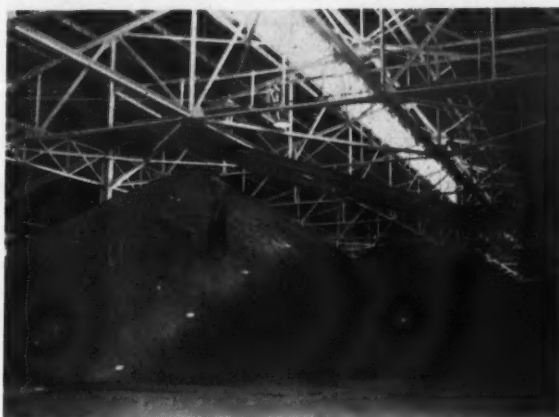
Send for Complete Bulletins and Lists on:
Filters and Filter Presses
Hydraulic Presses
Large Steel Storage Tanks
Standard Make Vacuum Pumps
Copper Jacketed Kettles

FIRST MACHINERY CORPORATION

GUARANTEED EQUIPMENT **F M C** LIQUIDATORS APPRAISERS
EAST 24th STREET and EAST RIVER DRIVE GRADUALLY 7-6072 NEW YORK, N.Y.

When inquiring specify CEP6139 — see information request blank, pgs. 2-3

STEPS IN THE PRODUCTION OF TIN



TIN ORE DISCHARGED FROM CRUSHER is stored in large stock piles in readiness for further operations in the extraction of pure tin. Raw ore is shipped in bags direct from South American mines.



UPON COMPLETION OF LEACHING AND BLEACHING process, ore is loaded into cars for transfer to the furnaces.



THESE LONG TUBES CARRY OFF all the smoke thrown off by the furnaces to Cottrell precipitator units. Electric current of 65,000 volts recovers tin carried in the smoke for addition to tin secured in the major operations.

ONE of the nation's finest tin smelters was recently put into operation in Texas. Here, ore from South American mines is processed by advanced methods under the most accurate laboratory control to secure the highest possible metal recovery and maximum yield from the ore. The most important operations of smelting this vital metal are shown here in their proper sequence — from crude ore to finished bar. Photos by Office of War Information.



TAPPING ONE OF THE FURNACES in which pure tin is extracted from the raw ore. Here tin is being drawn off into float.



TIN FLOWING INTO FLOAT which weighs 18 tons when filled. The metal is then conveyed to polling kettles where dross and skimmings are drawn off for remelting.

CHEMICAL EQUIPMENT PREVIEW

IN A NEW, MODERN SMELTER . . .



SAMPLE OF SLAG FROM FURNACE IS COOLED and then sent to laboratory for analysis to determine its tin content, now a factor of the greatest importance.



TECHNICIAN USING LABORATORY BALANCE to determine amount of tin remaining in slag. Accurate laboratory control achieves unusually high per cent of metal recovery.



POT BOILERS ARE USED TO KEEP METAL at a temperature of about 750 degrees until it is poured into molds.



THE PURE TIN IS MOLDED INTO BARS, usually at a temperature of about 650 degrees. Metal is ready for removal in bars about ten minutes after pouring.



STACKING BARS IN WAREHOUSE. Each weighs about 80 pounds and is valued at about \$41.60 at the present price of tin — 52c per pound.

PRECISION JOBS REQUIRE LINTLESS WIPING CLOTHS

★ *Delicate equipment must be kept clean and free from any foreign matter . . . USE BURCOTT CHEESECLOTHS OR SHOP TOWELS.*

★ *Irreplaceable machinery lasts 10% to 30% longer if properly cleaned after each operation . . . USE BURCOTT CHEESECLOTHS OR SHOP TOWELS.*

★ *Valuable instruments must always be dry and clean to insure efficient and accurate results . . . USE BURCOTT CHEESECLOTHS OR SHOP TOWELS.*

America's War Industries use Burcott Cheesecloths and Shop Towels because they are practically lint-free. All foreign matter has been removed. Special bleach and laundering makes them unusually soft and absorbent — they soak up moisture quickly. These Burcott cloths are so economical, you owe it to yourself to write for FREE samples today.

BURCOTT MILLS

620-H West Fulton Street
CHICAGO, ILLINOIS

When inquiring specify CEP6140 — see information request blank, pgs. 2-3

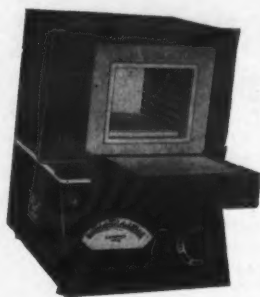
Have you ever considered the possibility of using LIQUID SCREENS?

Before investing in new filters, centrifuges, evaporators or settling tanks, investigate the possibility of using Liquid Screens . . . ROBINS Liquid Screens. They are able to perform several operations now being handled by more expensive equipment—principally in the field of separating solids from liquids. Full facts including flow sheets are available in Bulletin No. 123C. A copy will be sent on request.

ROBINS
CONVEYING BELT COMPANY
PASSAIC • N. J.

FOR MATERIAL AID IN MATERIALS HANDLING . . . **It's ROBINS**

When inquiring specify CEP6141 — see information request blank, pgs. 2-3



Huppert Laboratory Furnaces

Accurate—Sturdy
Outstanding Values

Model Illustrated
\$41.25
COMPLETE

Three heat ranges. High, 900° F. Medium, 400° — 900° F. Low, 0 — 400° F. Large, accurate Pyrometer aids in definite temperature control and in securing exact duplication of results.

Interior dimensions, 4 1/2" x 3 5/8" x 4 1/2". Overall dimensions, 11" x 13" x 11". Operates on 110 volts, A.C. or D.C.

Huppert Furnaces are ruggedly built for heavy duty service, with no exposed contacts. Prices range from \$24.75 up, with standard heat ranges up to 2500° F. (Special voltages, dimensions or temperature ranges to order.)

Write for free catalog

K. H. HUPPERT

166 W. Walton Place

Chicago, Ill.

When inquiring specify CEP6142 — see information request blank, pgs. 2-3



In actual performance, Ohmite Rheostats have been operated over a million times without servicing of any kind. It's the design, the construction, that makes them give such smooth, dependable, close control. You find them on duty in laboratory and production equipment to control the speed of centrifuges, the heat of electric ovens, the intensity of light, and the potentials of electrochemical reactions. Ten sizes from 25 to 1000 watts in stock and special units. Ohmite Engineers are glad to help you.



Write on company letterhead
for 96-page Catalog and Engineering Manual No. 40.

OHMITE MANUFACTURING CO.
4917 Flournoy St., Chicago

When inquiring specify CEP6143 — see information request blank, pgs. 2-3

PRODUCTION

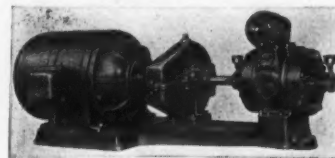
Simplified Steam Jacketed Pumps for Steam Pressures Up to 125 Lbs.

Heads of cast semi-steel with threaded intake and exhaust steam ports and drain plugs

Uses — For handling such materials as greases, tar, lard, palm oil and similar liquids that must be processed or transferred while hot.

Features — Stuffing box glands are of the bolted type with back-off nuts to make repacking a simple job.

Description — Steam jacketed heads are made of cast semi-steel, with threaded intake and exhaust steam ports and drain plugs. They are suitable for steam pressures up to 125 pounds. Sleeve bearings supplied with these pumps are rugged grease lubricated and located outside the pump casing away from the pumpage. This heavy bearing construction eliminates whip and distortion. Pumps for pressures in excess of 100 p.s.i. are furnished with anti-friction bearings. The manufacturer's standard units in capacities from 20 to 700 g.p.m. and pressures up to 300 p.s.i. are available with the steam jacketed head. Furnished with either single or double reduction gear drive and as single or multiple pump units.



STEAM JACKETED PUMP . . . for handling various hot liquids

BLACKMER PUMP CO., Dept. CEP, Grand Rapids, Mich.

When inquiring specify CEP6144 — see information request blank, pgs. 2-3

Portable Machine Cleans Delicate Parts Safely in 15 Minutes

Two basket arrangements — controlled reversing action up to 1000 RPM; unit weighs less than 50 lbs.



CLEANER UNIT . . . precision action, protects, as it cleans, bearings, jewels

operations 15 minutes. Additional baskets available so that parts may be kept in them until ready for re-assembly. Machine is portable, weighing less than 50 lbs. Controlled reversing action.

Operation — Basket containing parts is snapped onto motor

Uses — For the cleaning of small jeweled bearings, ball bearings, extruded metal parts, small motor assemblies, pinions, diaphragms and cylinders. Used extensively by large producer of quartz crystals.

Features — Permits safe and speedy cleaning of delicate parts by average employee. Average time for most op-

THE NEW DAVIS SAFETY BELT

A FEW standard parts make ANY type of belt — light and stronger webbing.

A few basic Davis belts and pads — and all the safety belt needs of your men are taken care of. For by assembling standard Davis parts you can quickly put together practically any type of safety belt required. Say goodbye to large, costly inventories of different safety belts, most of which remain unused for a long time. Davis Safety Belts are made of lighter, stronger, more flexible webbing. Men like working in comfortable Davis Safety Belts. Davis belts are also obtainable in special rubberized material for work with acids.

Address All Inquiries to:

**DAVIS EMERGENCY
EQUIPMENT CO.**

56 Halleck Street, Newark, N. J.



DAVIS PROTECTION

When inquiring specify CEP6145 — see information request blank, pgs. 2-3

How Capacitors Increased Electric System Capacity **40%**

The Geometric Tool Company of New Haven, Conn., was confronted recently with an electric power problem such as you may have today. It wished to add more equipment without installing larger wiring. Investigation showed that the distribution system was clogged with reactive (nonworking) kva. To neutralize this reactive kva, and make room for more working current, capacitors were installed. **The results:**

1. The capacity of the feeder was raised from 223 to 312 kw, a boost of 40%.
2. Voltage at the load was improved, and heating in the feeders was reduced.

Find out today if your power factor is such that G-E Pyranol capacitors will enable you to add equipment in your plant without rewiring. Ask your G-E representative, or:

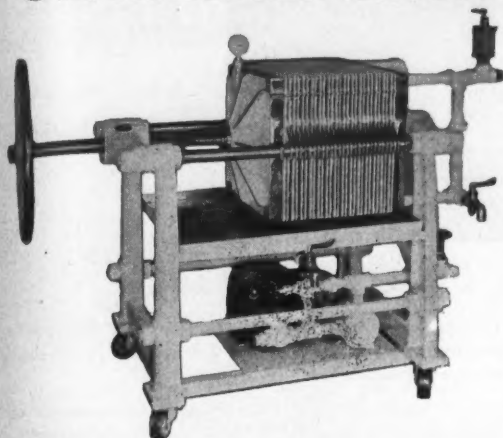
WRITE FOR BULLETIN GEA-77L
GENERAL ELECTRIC, SCHENECTADY, N. Y.

GENERAL ELECTRIC

When inquiring specify CEP6146 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

OIL RECLAMATION!



Ertel Engineers present this specialized unit for the filtration of cutting oils, hydraulic oils, etc.

Removal of microscopic abrasive matter is affected WITHOUT CHANGING THE CHARACTERISTICS OF THE OIL!

The "UTILITY FILTER" uses no rubber washers and is available in sizes to meet any production requirements.

ERTEL ENGINEERING CORP.

Manufacturers of Liquid Handling Equipment

KINGSTON, NEW YORK

New York Sales Office & Showroom . . . 40 W. 48th St.

When inquiring specify CEP6147 — see information request blank, pgs. 2-3

OPEN for inspection!



Send for free paper-weight-size sample

BLAW-KNOX STEEL GRATING

BLAW-KNOX DIVISION of Blaw-Knox Co.
Farmers Bank Bldg., Pittsburgh, Pa.

When inquiring specify CEP6148 — see information request blank, pgs. 2-3

PRODUCTION

shaft of machine and lowered into first of three jars which contains a cleaning solution. Compound is non-aqueous material designed to remove oil and grime without effecting metal. Basket agitated centrifugally up to 1000 RPM. Rheostat controlled. Between removal and immersion is second jar containing rinse, basket is revolved to throw off excess fluid. Third jar contains same rinse and is used as final degreaser and polisher. Fourth chamber contains heater unit. Hot air is blown into the parts by motor driven blower.

Description — Large volume capacity unit basket is 25/8 ID x 2 1/4 ins. deep. A triple basket arrangement consisting of a retaining frame which holds individual small baskets each 1 7/8 x 1 3/4 ins. Under each triple basket is a subbasket 2 1/8 x 1 1/8 ins. Mesh of both these units is divided into two cups, 7/8 ins. x 3/8 ins.

L & R MFG. CO., Dept. CEP, 54 Clinton St., Newark, N. J.

When inquiring specify CEP6149 — see information request blank, pgs. 2-3

Screw Conveyor Gives Sludge Unit Uniform Dust Feed From Collector

Precision control of sludge consistency; instant mixing prevents dispersion of dust into air

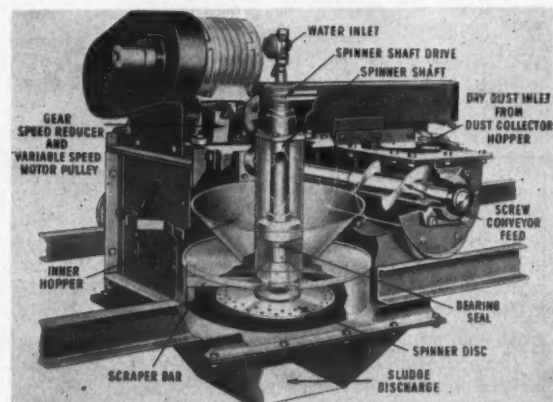
Uses — To make wet sludge of dust discharged from hoppers of dry type dust collectors by centrifugally mixing the accumulated dust with water or other liquids.

Features — This disposal unit has just been improved by the addition of a screw conveyor feed to provide a constant and uniform rate of feed of discharged dust. Unit provides immediate centrifugal mixing of dust and water, practically eliminating dispersal of dust into atmosphere.

Description — Dust which falls from the dust collector hopper through a flexible coupling is deposited directly into the screw conveyor of the wet disposal unit. The rate at which this dust is then fed into the mixing chamber can be controlled through gear speed reducer and variable speed motor pulley. At the same time dust enters the unit, water or other liquid is discharged at the center of a high speed mixing disc, causing an instantaneous mixture of the dust and water or other fluid. The sludge is then discharged at the bottom of the unit. Any desired consistency of sludge can be maintained by controlling the volume of dust and water fed into the unit.

AMERICAN FOUNDRY EQUIPMENT CO., Dept. CEP,
555 So. Byrkit St., Mishawaka, Ind.

When inquiring specify CEP6150 — see information request blank, pgs. 2-3



WET DISPOSAL UNIT . . . for close control of dry dust feed and sludge consistency

If you use Pumps

Send for this
NEW BOOK!



Eight Pages of Practical, Factual Information about the R & M MOYNO PUMP that Will Help Solve Your Pumping Problems!

If you're looking for a new, *different* type of pump that can do the job better and faster, with less maintenance and fewer pumping-trouble delays—send for this free book *now*!

It's a *brand-new* 8-page book, packed with practical information on the R & M Moyno Pump. Facts that show how its ability to handle heavy viscous and abrasive liquids can revolutionize pumping operations in *your* plant. It tells how the Moyno compares in *principle* with other types of pumps. How it is helping vital industries produce more—and at the same time improve product quality. How it has proved—feature by feature—to be the greatest pumping improvement in decades!

The entire book was written by R & M Moyno engineers who have spent many years solving the *toughest* pumping problems. If you don't need it for immediate reference, you'll want it later. It's yours free—mail coupon today!



ONLY 1 MOVING PART!

Here's the patented principle of the R & M Moyno Pump's amazing performance. A single-threaded helical rotor revolves in a double-threaded helical stator, providing pumping action like that of a piston moving through a cylinder of infinite length.

Moyno pumps are manufactured under R. Moineau patents

ROBBINS & MYERS, Inc., Moyno Pump Division, Springfield, Ohio

Please send me the new 8-page book on the R & M Moyno Pump.

Name.....

Firm Name.....

Address.....

Pump will handle.....

When inquiring specify CEP6151 — see information request blank, pgs. 2-3

NIAGARA FILTERS

WILL

*Boost your
production*



NIAGARA Filters, installed under the careful supervision of trained, experienced filtration engineers, are enabling numerous chemical plants to reach new production figures. Consider these important features:

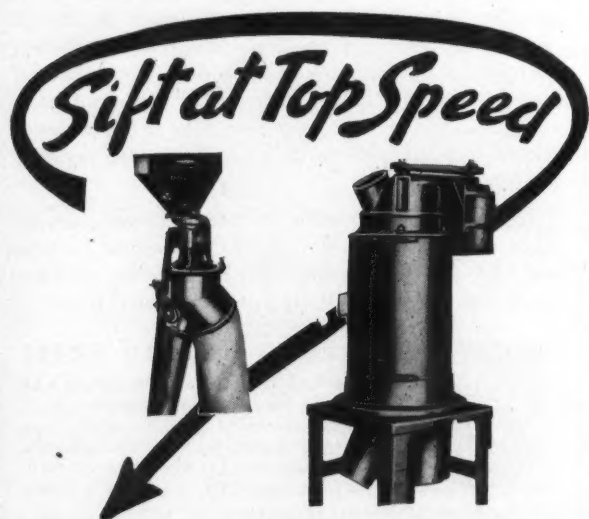
- Maximum Flow Rate per Unit Area
- Totally Enclosed, Pressure-Tight System
- All Metal Construction Where Required
- Extremely Compact, Space-Saving Installations
- Rapidly and Economically Cleaned
- Built in Any Corrosion-Resistant Metal
- Furnished in Full Range of Sizes
- Extremely Good Deliveries Available

Write today for your free copy of our new three-color booklet NFP-30.

FILTRATION ENGINEERS TO THE PROCESSING INDUSTRIES



When inquiring specify CEP6152 — see information request blank, pgs. 2-3



Abbé No. 0 Midget Sifter handles up to 300 lbs./hr. Occupies only 2.5 sq. ft. floor space.

Abbé No. 2 Sifter handles up to 10,000 lbs. per hour depending on mesh and character of material; occupies only 6.5 sq. ft.

CLEANER SEPARATION LESS SPACE and POWER

Bulletin 52 tells how the Abbé-Blutergess Turbine Sifter speeds up quality sifting of any material, to any mesh, eliminates shaking and vibration, cuts down power, space and labor.

ABBÉ ENGINEERING CO.
40 Church St., New York, N. Y.

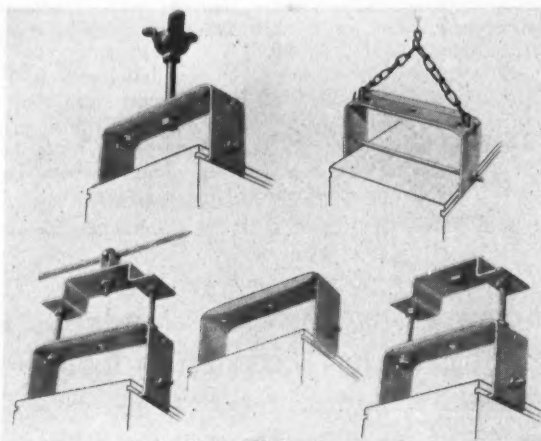
ABBÉ-BLUTERGESS TURBINE SIFTER

When inquiring specify CEP6153 — see information request blank, pgs. 2-3

PRODUCTION

Hanger Adapted to Mountings of Continuous Fluorescent Units

*Adjustable for chain, rod, surface or messenger
types for easy and neat installations*



SLIDE-GRIP HANGERS . . . to which light fixtures are snapped - held by through bolt

Uses — These slide grip hangers have been especially designed to provide faster, simplified installation and maintenance of continuous row fluorescent lighting installations. These hangers comprise adaptable mounting clamps offering a variety of applications for chain, rod, surface or messenger-cable mounting for use with the manufacturer's continuous row fluorescent fixtures, all of which are now so equipped.

Features — Hangers can be positioned at any point along the fixture housing, ceiling obstructions can be avoided, pipes and cables cleared. Flexibility allows better alignment of fixtures and neater installation.

Description — Slide grip hangers are mounted first. Fixtures are then lifted section by section and snapped into place in the vise-like grip of the hanger, then tightened by a through bolt which acts as a safety. Holes are provided in the hanger which permit chain and "S" hook mounting; use of bolt and lag screws in making installations close to ceiling, crowfoot mounting with hanger rod, suspension by dual hanger rods or messenger cable and dual hanger rod application. Descriptive folder available upon request.

SYLVANIA ELECTRIC PRODUCTS, INC., Dept. CEP,
Ipswich, Mass.

When inquiring specify CEP6154 — see information request blank, pgs. 2-3

Have You a "New Solution"?

If you have recently solved a problem in chemical process manufacturing, through a new application or new use of your regular products, the Editors invite you to submit the facts for publication in this department . . . in over 27,000 copies.

In submitting your "solution" please be sure to give the pertinent facts of (a) the problem, (b) just what was done and (c) what the results were. Send to
The Editors, CHEMICAL EQUIPMENT PREVIEW
737 N. Michigan Ave. Chicago



FORECAST:

*Some day you'll
look up to this
device*

SOLUTION . . .

The patented, exclusive Kemp Industrial Carburetor provides complete premixing of gas and air for complete combustion.

For efficiency in heat applications where, control of temperature and heat distribution are paramount—The Kemp Industrial Carburetor is the solution.

Our Engineering Department is at your service. Address The C. M. Kemp Manufacturing Company, 405 East Oliver Street, Baltimore, Maryland.



The Army-Navy E awarded "for excellence in the production of materials of war" flies at The C. M. Kemp Mfg. Co.

KEMP of BALTIMORE

When inquiring specify CEP6155 — see information request blank, pgs. 2-3

Super-Strong ROLLS



Exclusive patented features make Rodney Hunt Rolls the strongest and lowest cost rolls ever built. Made of wood, metal, rubber, or plastic in a wide range of lengths and diameters, Rodney Hunt Rolls have ended roll troubles and cut roll costs in hundreds of plants.

WRITE FOR CATALOG

Our new Roll Catalog No. 740 illustrates and describes a wide range of wood, metal and rubber rolls. Also wood and stainless steel reels, showing many patented features.

RODNEY HUNT MACHINE COMPANY

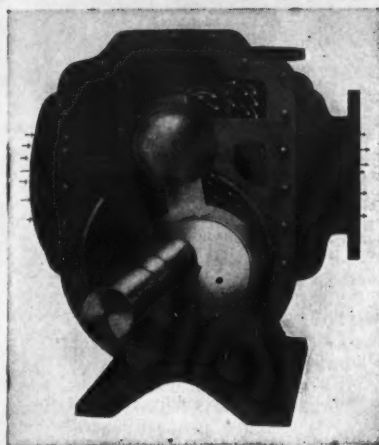
273 MAPLE ST.

ORANGE, MASS., U.S.A.

When inquiring specify CEP6156 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

KINNEY LIQUID PUMPS



KINNEY ROTATING PLUNGER PUMPS

have an established place where conditions require the moving of viscous liquids; mixtures of viscous liquids and entrained gas; and for operations requiring a calibrated output where consistently high volumetric efficiency permits their use as a combined pump and meter. Plain or steam jacketed. Write for Bulletin 18.

KINNEY MFG. CO. 3573 Washington St. BOSTON, MASS.

NEW YORK CHICAGO PHILADELPHIA SAN FRANCISCO LOS ANGELES

When inquiring specify CEP6157 — see information request blank, pgs. 2-3

Better SEPARATION.... Less POWER... Less SPACE



● A large processor of soy beans, using four Link-Belt liquid vibrating screens, obtains better separation of oil and meal at lower all-round expense than other methods used. Similar reports from numerous applications suggest you, too, can conserve and improve products economically with Link-Belt screens. For data—Write today for Folder No. 1877.

LINK-BELT COMPANY

2045 West Hunting Park Ave., Philadelphia
Offices, warehouses and distributors in principal cities

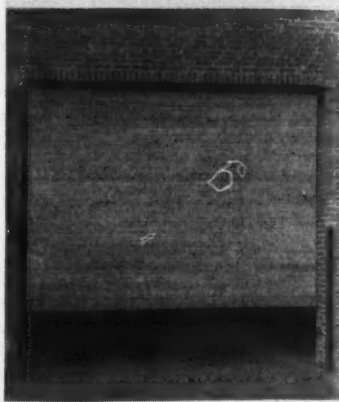
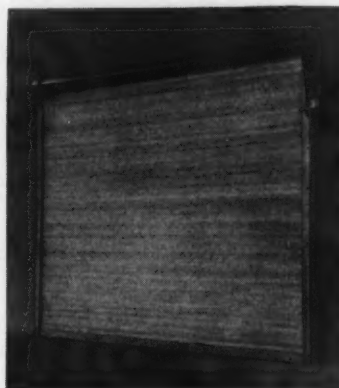
LINK-BELT Vibrating **SCREENS**

When inquiring specify CEP6158 — see information request blank, pgs. 2-3

PRODUCTION

Wood Rolling Door Operates Like Steel Type, Saves Vital Metal

Serviceable heavy-duty door, easily installed in old, new buildings, convenient, saves space



WOOD TYPE ROLLING DOOR meets requirements for heavy duty

above the lintel and travels in heavily constructed wood guides placed at the sides of the opening. Bearings are provided at points where curtain enters the guides. Helical springs inclosed in the barrel assure perfect counter-balancing. Operation can be manual, by chain and reduction gearing and where desirable by motor. Available in all practical sizes.

KINNEN MFG. CO., Dept. CEP, Columbus, Ohio.

When inquiring specify CEP6159 — see information request blank, pgs. 2-3

DESCRPTIONS of new products and new literature appearing in this issue are prepared from material submitted by manufacturers. While every precaution is taken, the publishers cannot guarantee the validity of claims. However the publishers welcome your criticisms of any apparent inaccuracies.

Uses — Designed to provide an easily operated heavy, secure upward rolling door for the variety of installations where this type is essential. Offers a reliable and reasonably priced substitute for the steel door of this type, also a product of the manufacturer.

Features — Easily installed in old or new buildings. Space economy. Does not require floor, wall or ceiling space. Uses minimum of vital metal. Raised, it leaves clear, unobstructed opening.

Description — Door proper is composed of wood slats suitably shaped to permit easy articulation and joined together by means of metal tapes or cables. Door coils overhead upon a barrel, journaled in heavy cast iron brackets

mounted at the corners at the opening

ARMSTRONG HUMIDIFICATION

*Speeds Production!
Reduces Waste!*



HERE'S WHY —

1. PREVENTS loss of weight, strength or quality of hygroscopic materials.
2. IMPROVES workability of materials.
3. CONTROLS troublesome or dangerous dust and static conditions.
4. PROVIDES healthier working conditions.
5. CONTROLS drying processes.

IF dry air stymies production and causes excessive spoilage in your plant, the compact unit above may hold the solution to your problem. Hundreds of plants all over the country are proving the value of Armstrong Steam Type Humidifiers for combating all the evils of low relative humidity.

Armstrong Humidifiers are low in cost—the model illustrated lists for only \$100 complete with sensitive Friez humidistat and all accessories and is capable of handling up to 40,000 and more cu. ft. of space. Installed and used as simply as unit heaters, connected into existing steam lines and electrical circuit. Let us send you detailed information. There is no obligation.

ARMSTRONG MACHINE WORKS

880 MAPLE STREET • THREE RIVERS, MICHIGAN

WRITE TODAY for free copy of new bulletin "Armstrong Humidifiers for Industry". It tells how Armstrong Humidifiers are being used advantageously in practically every industry for a wide variety of applications.



BUILT BY THE MAKERS OF ARMSTRONG STEAM TRAPS

When inquiring specify CEP6160 — see information request blank, pgs. 2-3

NEW PORTABLE CONVEYOR SPEEDS PACKAGE HANDLING



Buschman ROLL-OR-WHEEL portable conveyors speed package handling in production, or to and from loading platforms, trucks, box cars, stockrooms and warehouses.

In 10-foot, straight or curved sections—coupled to any length—roller or wheel equipped—easel, caster or tripod supports—quickly, easily set up, or moved from place to place where needed. Ideal for narrow aisles, crowded quarters.

Write for Bulletin No. C-36, showing many applications.

THE E. W. BUSCHMAN COMPANY, INC.

413 NEW STREET

CINCINNATI, O.

When inquiring specify CEP6161 — see information request blank, pgs. 2-3

From The Spank Of A Tugboat Propellor! —
... down to the minimum stirring pulse of a small laboratory stirrer—there's an Eastern model to fit almost any mixing requirement. We have a variety of models in three styles — portable, vertical and side-entering — and the engineering "know how" to adapt the right mixer to specific requirements.

Write for our Mixing Equipment Manual; it contains valuable engineering data.

EASTERN ENGINEERING COMPANY
49 Fox Street
New Haven Conn.

EASTERN MIXERS

When inquiring specify CEP6162 — see information request blank, pgs. 2-3

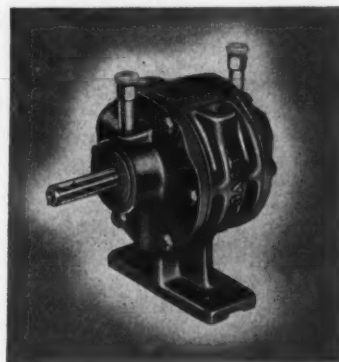
PRODUCTION

Compact Explosion-Proof Air Motors

Applicable to driving mixers and numerous similar equipment in hazardous areas

Uses — Especially adapted for use where precautions against explosions must be observed such as driving mixers and similar equipment in plants where such hazards are present.

Features — Cannot be burned out. Low maintenance. Very compact in proportion to power developed.



AIR MOTOR . . . EXPLOSION-PROOF
no reciprocating parts or springs

Description — Rotary principle. No reciprocating parts or springs. Automatic take-up for wear. Low maintenance cost. Positive starting in any position. These air motors deliver from 1/20 to 1 HP. Fitted with ball bearings and all parts are accurately ground. Self-adjusting shaft seals are used in place of packing.

GAST MFG. CO., Dept. CEP, Benton Harbor, Mich.

When inquiring specify CEP6163 — see information request blank, pgs. 2-3

Foundry Core Sand Reclaimed in Rotary Kiln, Louvre Dryer Units

Quantities of sand quickly made clean and usable, savings in labor

Uses — For reclaiming foundry core sand and making it clean and as usable as when new. Now in use in various foundries.

Features — Equipment is designed to effect savings in handling and labor.

Description — The equipment employed in this new



ROTARY KILN AND ROTARY-LOUVRE COOLER
installed for reclaiming foundry core sand

Engineered NOZZLES For Exact Processes

It's worth money to know that you are getting proper spray performance. When for example you want a nozzle to deliver 2.8 GPM at 20 lbs. pressure, at a 75° spray angle—there's a Spraying Systems nozzle to perform to these exact specifications.

Any industrial or chemical process benefits from the accuracy engineered into these nozzles. We make them to fit the job and performance is exactly as specified.

To solve your spraying problems, we offer many types and a great variety of standard sizes, plus our 18 years of specialization in nozzle manufacture. Our engineers know spraying—let them make cost-free suggestions. Write today to

SPRAYING SYSTEMS CO.

Engineers and Manufacturers

4037 W. Lake Street Chicago, Illinois

**SPECIALISTS IN THE DESIGN AND
MANUFACTURE OF SPRAY NOZZLES**

When inquiring specify CEP6164 — see information request blank, pgs. 2-3

STOP Liquid Splashes-Sparks Flying Particles with this 2-WAY DEFENSE PROGRAM

★ There is no "give" in this Cescro No. 750 General Utility Face Shield, which accounts for its ability to "take" and shunt off splashes, sparks and flying particles in the chemical process and metal fabricating industries. Extremely light in weight, with entire window metal bound for added strength and rigidity.



**CESCO No. 750
FACE
SHIELD**

enables its wearer to proceed aggressively, confident of working with the utmost in face and eye protection and comfort.

New Cescro No. 94 RESPIRATOR



Cescro No. 94 Respirator

Here is a respirator that FITS better, offers more COMFORT to the wearer! Carries a new Approval by the U. S. Bureau of Mines (No. BM-2142) for protection against Type A (Silica) — Lead and Nuisance Dusts. Its unusually large filtering area (40 sq. in.) promotes easier breathing. New Exhale Valve with speaking diaphragm permits a normal exchange of conversation. Functions with a high degree of efficiency against all common dusts, making it unnecessary to change filters under average working conditions. Get special circular today. Write.

CHICAGO EYE SHIELD CO.

2337 Warren Blvd.
Chicago • Illinois

When inquiring specify CEP6165 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

"Cleveland —OR EQUAL"

Worm gear specifications frequently place Cleveland in the preferred position:—

Because Cleveland has the experience—more than 30 years devoted to manufacturing Worm Gear Speed Reducers exclusively.

Because Cleveland has the knowledge—gained by long-continued Engineering Research into successful applications throughout the heavy industries.

Because Cleveland has the facilities—a plant built to produce worm gearing by volume precision methods—equipped with machines designed by our own Engineers—expanded to meet increasing demand.

Because Cleveland has the variety—Seven types cover every basic application in a complete range of sizes and ratios. All are built to Cleveland's uniform standard of excellence. Write "Cleveland Worm Gear" into your specifications and keep your machines running 24 hours a day. Clevalands never will let you down!

The Cleveland Worm & Gear Company, 3257 East 80th Street, Cleveland, Ohio.

Affiliate: The Farval Corporation, Centralized Systems of Lubrication.
In Canada: PEACOCK BROTHERS LIMITED

CLEVELAND *Speed Reducers*
WORM GEAR

When inquiring specify CEP6166 — see information request blank, pgs. 2-3



PRODUCTION

method consists of a rotary kiln and a rotary-louvre cooler. Binders, oils and other foreign materials are burned out of the shake-out sand after the cores have been broken and screened. The sand is then cooled in the roto-louvre cooler. The rotary action of this unit cools the sand quickly and thoroughly and discharges it to a vibrating screen after which it is ready for use.

LINK-BELT CO., Dept. CEP, 307 No. Michigan Ave., Chicago, Ill.

When inquiring specify CEP6168 — see information request blank, pgs. 2-3

Welder's Outfit Styled for Women

Tailored to provide light weight, comfort, snug fit and complete protection against sparks

Uses — Made and tailored especially for women welders to provide light weight, well fitting protective clothing.

Features — Wherever possible seams are located away from the direct line of fire. Cap included with outfit protects head, hair, ears — made something like bathing cap with flaps extending over ears. Welded inseam construction is used throughout for strength and to protect stitching from hot sparks.

Description — Made of especially selected chrome tanned cowhide, the complete costume includes short jacket, coat, overalls, sleeves and a 36 in. tailored apron. Garments are cut to afford free and easy movement and yet eliminate shapeless, uncomfortable bulk. Overalls are styled like women's slacks. A side placket insures a trim, comfortable waist line. Flared trouser legs provide additional protection for feet and easily go over safety shoes.

AMERICAN OPTICAL CO., Dept. CEP, Southbridge, Mass.

When inquiring specify CEP6168A — see information request blank, pgs. 2-3



PROTECTION WITH STYLE . . complete tailored chrome tanned cowhide outfit for women welders

**FOR BETTER
HAND
PROTECTION!**

**EDMONT
INDUSTRIAL GLOVES**

**SYNTHETIC RUBBER COATED
FABRIC LINED** these new gloves for women industrial workers offer complete hand protection against oils, solvents, acids, caustics and other corrosive materials. The reinforced fabric lining makes them snagproof and tear resistant. Comfortable on the hands and easy off and on. Flexible and efficient to work with. Exceptionally long wear. Two women's sizes. Medium and Large. Gauntlet type.

FOR MEN there is a choice of knit wrist and gauntlet styles—10", 12½", 14½", and 18" length. Two coating weights for heavy duty work. High resistance to oil, grease and other solvents which quickly destroy natural rubber. Curved fingers on most styles.

Stocked by leading distributors.
Write for samples and prices.

EDMONT MANUFACTURING CO.
501 Orange St., Coshocton, Ohio

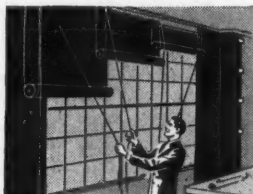
When inquiring specify CEP6169 — see information request blank, pgs. 2-3

What would you do if you were ordered to BLACKOUT tonight?

Throw The Switch? Lose
Production . . . Valuable Man-Hours?

Don't risk it.
Install tested, inexpensive

**CLOPAY
BLACKOUT BLINDS
NOW!**



Don't get caught by a sudden, nation-wide scramble for blackout materials that might take months to supply. Get ready now, for uninterrupted production during test blackouts or actual alarms. Do it quickly, economically, with CLOPAY Blackout Blinds. Safer, more convenient than paint. Raise and lower quickly. 1/7 the cost of opaque cloth of adequate quality. Made of tough "flame-proofed" crepe fiber. Used in many coastal plants and institutions, in several government buildings. Write for complete information and swatches of material.

CLOPAY CORPORATION
1253 Clopay Square
Cincinnati, Ohio

When inquiring specify CEP6167 — see information request blank, pgs. 2-3

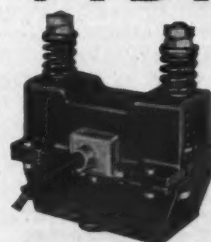
STOP

Pounding and Sledging
those
"CONSTIPATED"
Bins, Hoppers and Chutes

SYNTRON

"Pulsating Electromagnet"

VIBRATORS

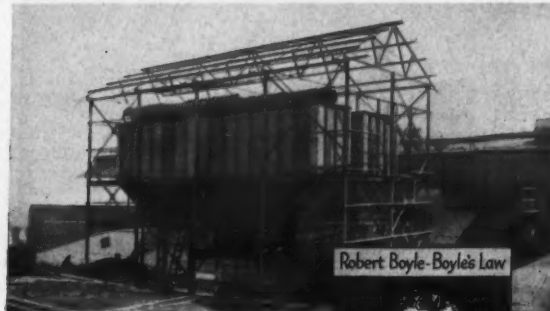


properly applied, will agitate and freely flow their contents.

Write us about your problem
SYNTRON CO., 110 Lexington Ave., Homer City, Pa.

When inquiring specify CEP6170 — see information request blank, pgs. 2-3

Nature makes the Rules for DUST COLLECTION



NORBLO Equipment In War Plants Points The Way To Post-War Planning

War production has made necessary many new applications of NORBLO dust collection which were not considered economically feasible under peacetime conditions. Some of these installations are revising processes to such an extent that the new methods will enforce extensive modernization under post-war competitive conditions.

In the chemical and metallurgical industries NORBLO engineering is showing in many instances that the good housekeeping element in dust collection can be combined with salvage of valuable materials to yield new over-all economies so direct and immediate as to amortize your investment in months instead of years.

All NORBLO equipment is designed and fabricated completely in our own shops. At present, of course, NORBLO facilities are wholly devoted to production for plants with war priorities.

P.S. A new catalog with complete performance tables for all sizes of NORBLO Exhaust Fans is just off the press. Ask for your copy of this useful book.

Norblo
DUST COLLECTION
THE NORTHERN BLOWER COMPANY
6409 BARBERTON AVENUE • CLEVELAND, OHIO

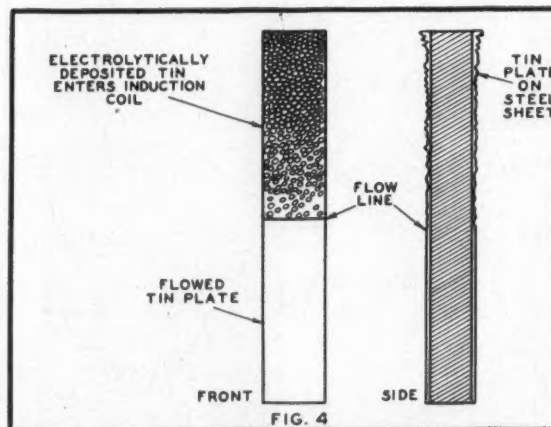
When inquiring specify CEP6171 — see information request blank, pgs. 2-3

★ IDEAS ★

Radio Waves — 200,000 Cycles a Sec., Give Tin Plate Fine Finish

High frequency, induction heating method of fusing electrolytic tin plate is speedy, economical

High frequency induction heating is now producing a smooth shiny, corrosion resisting surface on 60 tons a day of 14 in. strip — a substantial increase over the old rate. The method was developed by Westinghouse to meet problem of increased production and at the same time use less tin. The dull, electrolytic tinned steel sheet is passed into inductor heater coil where it is heated by high frequency current to the melting point of tin — 450 F. after traversing about ninety percent of the coils length. At this point the rough tin deposit flows into a smooth surface. The high frequency current in the inductor heater coil sets up lines of flux. Direction of these lines reverses 400,000 times a second. Eddy currents are induced in the strip as it passes through this rapidly changing magnetic field and cuts the lines of flux. Heat is produced by the resistance of the strip to the flow of these induced eddy currents. When heat raises the temperature to the fusion point of tin, the granular deposit on the steel sheet flows into a smooth shiny surface. The alternating current is converted to direct current power by a high voltage rectifier-plate transformer and an electronic rectifier. DC power applied to the plates of a bank of 3600 kw vacuum tube oscillators, similar to those of a radio broadcasting transmitter, is converted into high frequency AC power of 200,000 cycles per second. Shooting into the tin the waves rip electrons — from the atoms of tin. These electrons driven by the current smash into one atom after another, creating heat at each collision. The melting action stops when the strip moves out and the water cools the metal. Present electrolytic lines operate at 500 feet per minute but it is expected that this will in the future be increased to 1000 feet per minute. This new induction heating method of finishing tin plate can easily match that speed. Gas furnaces operate at about 150 feet per minute and the hot oil treatment at only 50 feet per minute. The advantage of the induction heating method are: avoidance of the cumbersome furnaces, metal untouched by any



ROUGH TIN LEVELED BY HIGH FREQUENCY . . granular deposit flows into smooth, shiny surface

supporting while it is hot, eliminating marring of the surface. Heat generated can be adjusted to compensate for loss of speed when it is necessary to weld new strip to end of completed one. The High frequency unit can be put into electrolytic tinning line and can operate as fast as the strip can be plated.

Refuse & Wire Drawing Compound Yield Tons of Critical Metals

Value of recovered metals from both sources reached total of \$18,000

Ashes taken from steam process boiler pits in salvage department shop are yielding critical materials. The ashes are from shop refuse and rubbish from all parts of the plant which are used for fuel. Iron, steel, brass, copper and aluminum are recovered. Ashes are passed through a ball mill or grinder, a magnetic separator selects the ferrous from the non-ferrous metals and a concentration table sorts out the finer particles. During last year a total of 624,000 pounds was recovered for a gross cash return of \$10,000.

Other salvage operations yielding critical material are being continuously carried out. A waste known as "copper and grease" is collected from a wire-drawing department, being taken from pits under wire-drawing machines. It consists of a mixture of wire-drawing compound and fine copper particles. The compound is in liquid form, containing water, soap and tallow and is used for lubrication and cooling of the drawing dies. When the water and grease are removed the copper remains in dry, hard chunks. General Electric Co., Schenectady, N. Y. in whose plants these salvage operations are performed states that this latter operation during the preceding year recovered 88,000 pounds of copper for a gross return of \$8000.

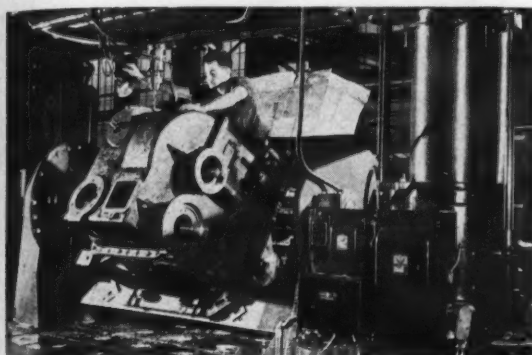
Fixture Holds Work at Any Angle in Full Circle and at Any Plane

Used to speed drilling of 1000-2000 lb. marine gear casings replacing crane formerly required

A universal indexing trunnion fixture which permits the positioning of marine gear casings at any angle in a full circle at any plane effects savings of 24 to 32 hours per week. Its manner of rotation combines that of a merry-go-round and a ferris wheel. The casings weigh 1000 to 2000 pounds. Formerly a crane was used to reposition the casing after each surface was drilled, requiring each piece of work to be set up at least six times. Now, work is set up just once on a table which is mounted on a frame suspended on two horizontal pivots or trunnions. One of these trunnions is chain driven through a worm gear arrangement by a three-quarter horsepower geared motor. A circular indexing plate with eighteen holes around its periphery is mounted on the driving side for quick selection of any of the various angles called for by the specifications. A stud is used to lock the fixture at the desired angle. For lateral rotation the table must be in flat position with the work right side up. The clamping bolts at the four corners of the table are removed, and, by turning a lever underneath the fixture, the operator raises the

IDEAS

table just enough to clear the frame. The table then can be turned easily by hand and relocked in any position. The table also serves as a drill jig for the base of the casing, eliminating the need for layout and assuring accuracy. In this particular application 110 holes must be drilled in the casing. The fixture permits the work to be turned completely around in either direction with no more effort than to push a revolving door. Movement is controlled by a push button and the casing is rotated electrically in either direction through a 360 degree circle. General Electric Co. developed this device to simplify handling of the operation described at one its major works.



DRILLING GEAR CASING . . held at 45 degree angle by revolving fixture

Coating Renders Rubber Tack Free

Brushed, sprayed on natural or synthetic products, clear, flexible surface of high lustre

Uses — Rubber and synthetic rubber products can be rendered surface tack free by means of this coating.

Features — Can be brushed or sprayed on the finished rubber articles, or in the case of small objects the coating may be applied by dumping them in a bath of the liquid, diluted with denatured alcohol if desired.

Description — The coating is fast drying and leaves a clear, transparent, flexible surface of high lustre. Gives a continuous film resistant to gas to a considerable extent. Information and samples upon request regarding "Hevelac."

GLYCO PRODUCTS CO., Dept. CEP, 230 King St., Brooklyn, N. Y.

When inquiring specify CEP6172 — see information request blank, pgs. 2-3

Acid Resistant Tank Linings

Applied in seamless manner; possesses unusual resistance to caustics, used in war plants

Uses — For tank lining in a wide variety of applications where rubber would customarily be indicated. Used in war production plants.

Features — Resists nitric, hydrofluoric and other powerful acids at elevated temperatures. Also immune to caustics

Description — Applied by experts in the plant of manufacturer. Gauges will vary with requirements 1/4 to 3/4 in. Information will be sent upon receipt of complete data regarding individual requirements. Refer to Alkacite, Type HM-A1.

PROTECTIVE COATINGS, Dept. CEP, Box 56, Strathmore Sta., Detroit, Mich.

When inquiring specify CEP6173 — see information request blank, pgs. 2-3

For handling

Acids * Caustics
Butanes * Propanes
Solvents * Oils

FOR STANDARD HIGH HEAD SERVICE. Types T and XT. Capacities: Up to 150 G.P.M. or 200 lbs. differential pressure.

FOR HIGH TEMPERATURES up to 850° F. Types PT and PXT. Cradle mounting, stuffing box, and ball bearings all water cooled. Capacities: Up to 150 G.P.M. or 175 lbs. differential pressure.

Check YOUR PUMP REQUIREMENTS AGAINST **DAYTON-DOWD** TURBINE PUMP FEATURES

HIGH PRESSURES IN SINGLE STAGE

Regenerative principle of this pump enables its single, multi-vaned impeller, operating at normal speeds, to develop very high pressure in single stage.

WIDE OPERATING RANGE

Will operate over a wide range of heads with practically no variation in capacity. Not essential to figure exact total head. Assures continuous operation. Power consumption decreases as head decreases.

LOW NPSH REQUIREMENT

Lower pressure drop (suction loss) is an outstanding turbine pump characteristic. This characteristic assures satisfactory operation under minimum head conditions.

ONE LOW-PRESSURE STUFFING BOX

Subjected to suction pressure *only*—never to discharge pressure. Minimizes chance for leakage. Ideal for volatile liquids.

SELF-PRIMING . . . HANDLES VAPOR WITH LIQUID

Pump keeps its prime after initial start. Gradual increase in pressure from inlet to discharge minimizes possibility of vapor-locking.

CRITICAL METALS MINIMIZED

Only a small casing, two sideplates and the impeller comprise the pump-end. Saves on critical metals. Lowers cost of corrosion-resisting construction.

ONLY 1 ROTATING PART . . . NO FRICTIONAL CONTACT

Single impeller rotates freely without wear from metal-to-metal contact.

PERFECT HYDRAULIC BALANCE

Liquid is delivered *equally* to both sides of impeller through twin inlet openings. Eliminates thrust on ball bearings.

WITHSTANDS PRESSURE UP TO 400 LBS.

Dayton-Dowd Turbine pumps unsurpassed for ruggedness. For pressures above 400 lbs., steel or alloy casings are available.

LOWER COST STAND-BY PROTECTION

Wearing surfaces are all incorporated in side-plates and impeller. Extra set affords stand-by protection at nominal cost.

DAYTON-DOWD

COMPANY
QUINCY, ILLINOIS

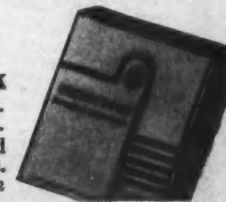
Offices in Principal Cities

TURBINE AND CENTRIFUGAL PUMPS

Free

Turbine Pump Data Book

Contains 144 pages of illustrations, performance curves, selection tables, installation and operating information, and miscellaneous data on turbine pumps. Sent **FREE** upon request written on your business letterhead.



—When inquiring specify CEP6174 . . . see information request blank, pgs. 2-3—

No Dermatitis To Stop Busy Hands
if you protect
them with
Stanzoil
Neoprene
Gloves



Many workers' hands are made sore by an allergen in rubber gloves. Stanzoil Gloves of DuPont's miracle neoprene are free of this harmful factor—hands are safe *inside* and extra safe from outside because neoprene resists attack by oils, acids, caustics, often outlasts rubber 3 to 7 times. You save money, avoid lost production and costly liability claims with Stanzails. Complete line to meet all needs. Used in hundreds of industries. Write now for current delivery data.



Synthetic Rubber Division
THE PIONEER RUBBER COMPANY
Over 20 Years of Quality Glove Making
239 Tiffin Road, Willard, Ohio, U.S.A.
New York • Los Angeles

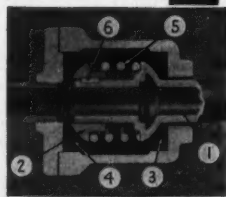
MADE WITH DU PONT NEOPRENE

When inquiring specify CEP6175 — see information request blank, pgs. 2-3

YOU PACK UP YOUR TROUBLES
when you stop packing stuffing boxes

PACK up your troubles is good advice. But packing and repacking isn't the way out of stuffing box and steam fit troubles. Much better advice is to switch to the Johnson Rotary Pressure Joint—the modern "stuffing box" that has no packing, and is completely self-oiling, self-adjusting and self-aligning besides.

50,000 installations of the Johnson Joint, all within less than ten years, show how rapidly industry is learning that the only sure way to pack stuffing box troubles out of the way once and for all is to stop packing.



The Johnson Rotary Pressure Joint

- Nipple (1) fastened to roll. Sliding collar (2) keyed (6) to nipple. Carbon graphite seal ring (3) and thrust ring (4), which eliminate packing and oiling. Spring (5), for initial seating only; in operation joint is pressure-sealed.

SPEED UP PRODUCTION
from Dry Cans, Calenders, Mills, Ironers, and similar machines.
1. Eliminates many causes of machinery shutdown—saves valuable production time.
2. Offers a simpler, neater way to provide more efficient methods of draining rolls and drums.

WRITE FOR
BULLETIN

Product of The Johnson Corporation
826 WOOD ST., THREE RIVERS (A) MICHIGAN

When inquiring specify CEP6176 — see information request blank, pgs. 2-3

I D E A S

**"Umbrella" for War Plants Deflects
Lightning at 11,000,000 M. P. M.**

*Saves quantities of copper formerly required
for lightning rods*



LIGHTNING CAUSES FIRE . . . in unprotected model building



NEW LIGHTNING DEFLECTOR . . . demonstrated in laboratory test

nated. The protection provided by the system described here has been dramatically demonstrated in laboratory tests, two of which are illustrated. The methods were developed by Westinghouse engineers.

**Chemical Industries Take Part in
Manpower Conservation Drive**

*Increased frequency rate among factors prompting
effort in program; \$5,000,000 fund being raised*

The chemical and allied industries are playing a major role in the vast wartime accident prevention program sponsored by the National Safety Council and financed by the War Production Fund to Conserve Manpower. Moving into

Some war industries plants are now using a "wire umbrella" to shield explosive and oil storage centers against lightning. It deflects lightning driving earthward at more than 11 million miles a minute. The "umbrella" consists merely of a steel wire strung above building and anchored to wooden poles at each end. The wire is then connected to steel poles buried in the ground. Previously areas housing explosives or oil were guarded by lightning rods involving the use of as much as 250 pounds of copper. This new method requires only approximately 60 lbs. of steel for the same coverage. With the new design danger of lightning leaping to metal sections of the building and causing sparks has been eliminated.

SAFE MIXING
Even for Explosives

PNEUMIX

Air-Motored

AGITATORS

. . . powered by air motors, eliminate fire and explosion hazards. They are spark-proof, splash-proof. They can't over-heat or burn out.

Stirring saponified nitroglycerine, agitating TNT to cool it, mixing varnish, lacquer, cosmetics, dairy products, pharmaceuticals, are only a few of the difficult mixing jobs that Pneumix Agitators are doing. Variable speeds up to 6000 RPM for batch capacities up to 150 gallons.

Send for Bulletin



ECLIPSE AIR BRUSH CO.

393 Park Ave.

Newark, N. J.

When inquiring specify CEP6177 — see information request blank, pgs. 2-3

**FOREMOST
IN CINCINNATI**

**HOTEL
FOUNTAIN SQUARE**

If you consider location important, stop at Hotel Fountain Square — close to all business, shopping and social centers, providing unrivaled convenience in Cincinnati. Large, pleasant rooms — superior service. For fine food visit the air conditioned Moorish Grill — and the Olympic Cafe and Bar for sparkling gaiety.

**250 MODERN
OUTSIDE ROOMS
WITH BATH**

**\$2.50
from 2.**

M. J. DEININGER, Manager



ONE OF THE ALBERT PICK HOTELS.

When inquiring specify CEP6178 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

FIND METAL-CUTTING HORSEPOWER QUICKLY WITH THE G-E MOTORULE



Set the scales and read off power required for cutting operations on lathes, drills, milling machines, planers.

THIS new load calculator makes it easy to select motors that match the job when the recommendations of the machine builder are not available. It helps avoid the risk of undermotoring and the waste of overmotoring. With the MOTORULE, you can check to make sure you are getting the most out of all your machine motors, old or new.

Accurate—easy to understand—applicable to the working of a wide range of materials. FREE with full instructions from your G-E Motor Representative or direct from General Electric Company, Schenectady, N. Y.

BUILDER OF TRI/CLAD MOTORS

GENERAL ELECTRIC

When inquiring specify CEP6179 — see information request blank, pgs. 2-3



GET SPLIT-SECOND SPEED

WITH ACCURATE *Printed* WEIGHTS

Time is short... production-for-victory demands SPEED! Get TOP-speed in accurate PRINTED weights... look to Toledo Printweigh! Eliminates costly human errors in reading and writing weight figures... a hazard that's increased by today's longer hours and greater fatigue. Simple, direct, dependable, split-second operation! Prints BIG figures FAST... on thick tickets... sheets... or strips... with extra copies. Send today for latest information... Toledo Scale Company, Toledo, Ohio.

**SEND
NOW!**

Direct PRINTING OF
TOLEDO Accurate WEIGHTS
IN BIG FIGURES

675
907

When inquiring specify CEP6180 — see information request blank, pgs. 2-3

I D E A S

wartime high gear with a program big enough to meet the national accident crisis required money to meet this emergency budget. The War Production Fund to Conserve Manpower was organized and representative business leaders undertook the financing of the Council's biggest assignment. A national committee of 600 members was formed with an executive board of seventy-four. Preliminary canvass through the national connections of major companies has yielded more than \$1,500,000. In working out the campaign the general strategy will be to speed up the existing program, get more coverage, more technical assistance and more public cooperation in accident prevention.

In 1941 all kinds of accidental deaths and injuries on and off the job totalled 102,500 deaths and 9,300,000 injuries for a loss of 480,000,000 man days. Since Pearl Harbor through the end of November 46,300 accidental deaths affecting industry have been recorded. An important factor in the present situation is the increased frequency rate of eight percent, based on the last available analysis covering 1941. This increase comes after a decade and a half of steady decline. Encouraging on the other hand was the decrease of eight percent for the same period of the severity rate. The chemical field showed the average frequency increase eight percent but its severity rate declined fifty percent. Personal alertness, safety devices, clothing and other precautions all contribute to this program.



ASBESTOS SUIT, APRON, HOOD . . . protect chemical worker filling tank car with molten phosphorus

Labels Made to Adhere to Metal

Special gumming, applied to linen fabric or paper on which information may be written or printed

Uses — For use on machines, parts and tools to carry inspection data, identification, instructions, warnings or other information. Now being used in numerous industrial plants.

Description — Gumming used has property of adhering securely to metal. The gumming can be applied to either paper or linen fabric upon which information may be written or printed. Further information and samples for test available upon request.

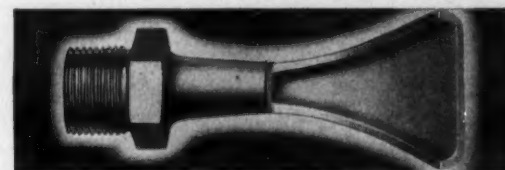
EVER READY LABEL CORP., Dept. CEP, 141 East 25th St., New York, N. Y.

When inquiring specify CEP6181 — see information request blank, pgs. 2-3

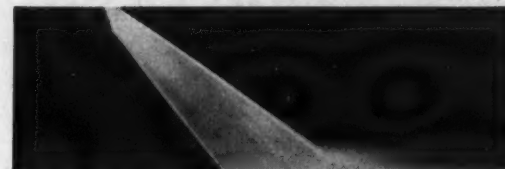


REX FLAT SPRAY NOZZLE DOES THE JOB FASTER

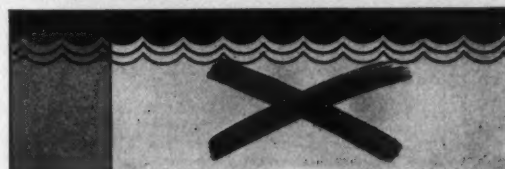
The flat spray from this scientifically designed nozzle does more than merely wash or clean or cool. It gives you the advantages of an exclusive knife-like cutting action so powerful and efficient that it handles these operations in far less time than old-fashioned methods.



Take a good look at the nozzle itself—The Rex Flat Spray nozzle is made from a single casting and its accuracy is built in.



Concentrated for harder impact. That high velocity spray is concentrated on a thin, flat line of impact for harder, sharper biting.



Saves up to 80% of liquid. Many installations of Rex Flat Spray Nozzles show that as much as 80% less water or solution is required.

We have a very interesting booklet which gives more details about Rex Flat Spray Nozzles and their many uses. Write for it, or, better still, call in the Rex man. Address Chain Belt Company, Conveying and Engineering Products Division, 1694 West Bruce Street, Milwaukee, Wisconsin.

REX FLAT SPRAY NOZZLES
CHAIN BELT CO. OF MILWAUKEE

When inquiring specify CEP6182 — see information request blank, pgs. 2-3

Direct Action Float Control for Low Working Pressure



Here is an application of the R-S Butterfly Valve which offers simplified performance, wedge-tight shut-off and reduced maintenance. Can be furnished with counter weight assembly or larger floats as required.

These manually and automatically operated valves provide positive control and wedge-tight shut-off of any material that flows or is forced through a pipe—sizes to 84 inches and pressures to 600 pounds. Streamlined for self-cleaning. Write for detailed information and Catalog No. 10-B.

BUTTERFLY VALVE DIVISION
R-S PRODUCTS CORPORATION
4531 Germantown Avenue, Philadelphia, Pa.



When inquiring specify CEP6183 — see information request blank, pgs. 2-3



PROCESSING EQUIPMENT



ROBINSON MANUFACTURING COMPANY
WORKS: MUNCY, PA.
30 CHURCH STREET, NEW YORK

"Unique" Tumbling Prism Mixer. Driven by gearhead motor. For handling dry powders that cannot stand much agitation. All-steel welded frame.

When inquiring specify CEP6184 — see information request blank, pgs. 2-3

Equipment for Production

New Light Weight Dust Respirator Gives Wearer Great Breathing Ease

*Designed for comfort during prolonged wear,
U. S. Bureau of Mines approval*

Uses — To provide dependable protection against harmful dusts, high degree of breathing freedom and general comfort in respirator of light weight that sacrifices no essential or customary requirements and meets approved specifications.

Features — Can be worn for extended periods without impairing worker's efficiency. Among the lightest respirators to receive U. S. Bureau of Mines approval.

Description — This light weight respirator has especially designed inhalation and exhalation valves which contribute greatly to the high degree of breathing ease enjoyed by wearer. Long lasting, comfortable head bands hold the respirator securely in place. The face piece is easily adjusted to fit the contour of worker's face. Particularly adaptable for use by women. Economical service. Design is greatly simplified and there are very few replacements parts to get out of order. This particular respirator is known as the Willson No. 10.

WILLSON PRODUCTS INC., Dept. CEP, Reading, Pa.

When inquiring specify CEP6185 — see information request blank, pgs. 2-3

Portable, Reversing Belt Conveyor Has Maximum Incline of 35 Degrees

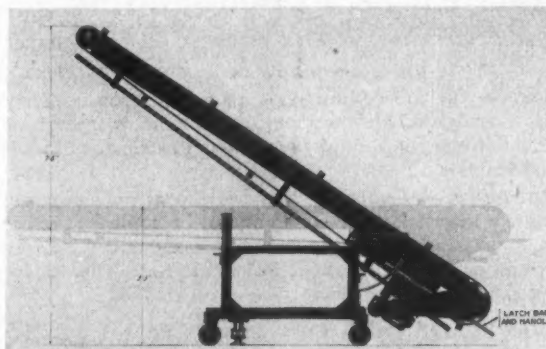
*Belts with or without cleats, no side guards, speed
60 ft. per min., max. live load 100 lbs.*

Uses—For piling cartons, packages, bags, boxes. Loading and unloading miscellaneous loads. Several of these conveyors can be used in series without cleats for transportation at various points in plant warehouse.

Features—Easily movable and adjustable, instantaneous



LIGHT WEIGHT RESPIRATOR
... great breathing ease



PORTABLE ADJUSTABLE BELT CONVEYOR

change in incline position. Self-locking drive prevents load running back when motor is stopped.

Description—Belts furnished with or without cleats. No side guards make it possible to handle loads wider than belt. Instantly reversible. Large drive pulley for maximum belt life and positive belt drive. Rigid operating position secured by locks on two wheels and lock on adjustable incline boom. Heavy structural frame. Conveyor is portable, reversing, operating from horizontal to maximum of 35 degrees. Length 11 feet. Belt 14 inches wide. Speed, approximately 60 feet per minute. Adjustable take-up to keep belt at proper tension. Casters 6 in. diameter swivel type with two wheel locks. Drive 1/3 HP single phase, 60 cycle A. C. 110 volt geared head motor, with 25 ft. flexible connecting cord. Capacity maximum live load 100 pounds or 600 pounds per minute.

LAMSON CORP., Dept. CEP, Syracuse, N. Y.

When inquiring specify CEP6186 — see information request blank, pgs. 2-3

Filters for Continuous or Volume Service Cleaned in 12 Minutes

*Filter pressure may be regulated by selective control;
Units available for 18, 24, 30, 36" discs*

Uses — For large scale or continuous filtration. For applications where high flow rates are required.

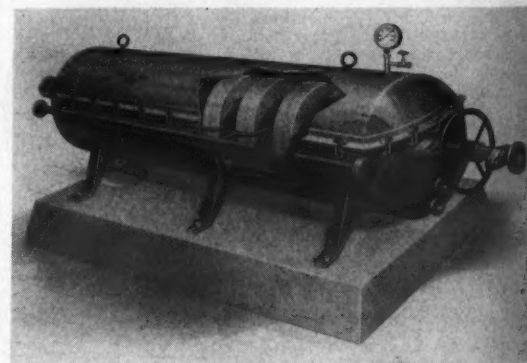
Features — Units need be opened only at long intervals as sharp sprays for the filterstones plus provisions for both compressed air (or steam) and water for sluicing the cake from the tank insure thorough cleaning between runs. In larger size units, filterstones may be revolved during backwashing by motor instead of hand wheel.

Performance — Three filters each of 96 sq. ft. filter area, one always shut down for cleaning used in 24 hr. 7 day week service. Each unit operates about 7 hrs. before requiring cleaning. Estimated total time for cleaning and precoating — 12 minutes. Tests run on saturated salt brine indicate average flow rate of 300 to 400 gpm for each unit. Filtering cycle on brine tested 170-190 minutes. Variation is result of filtering pressure which is under selective control.

Description — Each filter weighs 2000 lbs. Requires space 10 x 3 ft. This type filter available for use with filter discs of 18, 24, 30, 36 in. diameter. Identified as H type LeVal filter.

Le VAL FILTER CO., Dept. CEP, 925 Wrightwood Ave., Chicago, Ill.

When inquiring specify CEP6187 — see information request blank, pgs. 2-3



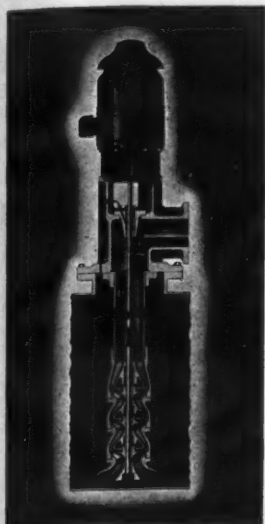
FILTER . . 24 hr. service interrupted only by cleaning periods
averaging 12 minutes

CHEMICAL EQUIPMENT PREVIEW

PRODUCTION

Vertical Volatile Fluid Pump

Compact, easily installed; largest size requires maximum of 25 sq. in.



VERTICAL PUMP . . adjustable semi-open impeller

Uses — For safe handling of volatile liquids or where quick clean-up of sumps, tanks or compartments is required. Used with air base re-fueling systems.

Features — Vertical construction. Largest size requires maximum of 25 sq. in. space. Compact. Economical to install. Discharge head designed to receive any standard make enclosed fan-cooled motor (explosion-proof) 2 to 75 HP hollow shaft construction.

Description — Constructed of Pomoloy iron, a semi-steel, dense structure, high tensile strength. Discharge head base flanged,

drilled to fit standard openings in gasoline storage reservoirs. Specially designed packing gland provided for gas and oil applications to capture and return seepage to reservoir. Length of discharge column to be furnished with each unit varies according to requirements. Like the maker's other turbine pumps, semi-open impeller used is adjustable at motor head to take care of varying capacities and head conditions. Pockets and traps where vapors can accumulate and gas lock the pump are eliminated. Known as "Gas-Fuel Pump."

POMONA PUMP CO., Dept. CEP, 206 E. Commercial St., Pomona, Cal.

When inquiring specify CEP6188 — see information request blank, pgs. 2-3

Pipe Joint Compound Replaces Litharge and Glycerin

Expands as it sets, smooths flanged faces; for fuel, refrigerant, steam and other lines

Uses — This pipe joint compound combines certain features of performance with its value as a replacement for compounds consisting of litharge and glycerin, now vital to war production. Used in ammonia, brine, oxygen and freon lines. As a seal for all types of joints.

Features — A distinctive property of this compound is its action of expansion while setting. Economical, in many cases giving several times the service, quantity for quantity of some compounds. Withstands high pressure, deflection, high temperature, vibration.

Description — Designed to expand as it sets forming a leak-proof joint. The resulting joint can be easily taken apart. Will carry anything that can be carried in metal pipe. Descriptive booklet, "Overcoming the Litharge and Glycerin Shortage," available on request.

X-PANDO CORP., Dept. CEP, 43-15 36th St., Long Island City, N. Y.

When inquiring specify CEP6189 — see information request blank, pgs. 2-3



Here Is **Why** the Belts You Use Should be Built with the

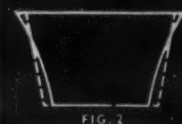
CONCAVE SIDE !

A very simple test (pictured above) will show you the great importance of the Concave side. To make this test, take any V-Belt and bend it as it bends in going around its pulley. With your fingers, grip the sides of the bending belt. You will feel those sides change shape. Fig. 1, (on the right) shows what this shape-change does to a straight-sided V-Belt. Note the out-bulge of the sides.

Now look at Figure 2. There you see how differently the same shape-change affects a V-Belt built with the patented Concave side. The Concave side merely becomes straight—and this makes the bending belt exactly fit its sheave groove. There is no side-bulge. This means that wear is distributed evenly over the whole side of the belt—insuring longer life! Also, the whole side of the belt uniformly grips the sheave wall. This means heavier loads are carried without slippage—a real saving in belts—which conserves one of the nation's vital resources—rubber!

Only belts built by Gates are built with the Concave side, a Gates patent.

What Happens When a V-Belt Bends



THE GATES RUBBER COMPANY

Engineering Offices and Stocks in All Large Industrial Centers

GATES VULCO ROPE DRIVES

Chicago, Ill.
549 West Washington

New York City
215-219 Fourth Avenue

Atlanta, Georgia
738 C. & S. Natl. Bk. Bldg.

Los Angeles, Cal.
2240 East Washington Blvd.

Denver, Colo.
999 South Broadway

Dallas, Tex.
2213 Griffin Street

Portland, Ore.
333 N. W. 5th Avenue

San Francisco, Cal.
2700 16th Street

When inquiring specify CEP6190 . . . see information request blank, pgs. 2-3

HELP YOURSELF

TO AN
EXTRA
SET OF
CASTERS



BY A
REGULAR
SCHEDULE
OF
LUBRICATION

Conservation of all equipment is the war-time rule. With Service Casters, careful maintenance will prolong the period of top efficiency — get EXTRA SERVICE equal to an extra set of casters. Write us your questions on caster maintenance.

THE SERVICE CASTER AND TRUCK CO.
790 N. Brownwood Ave., Albion, Mich.

Eastern Factory: 430-32 Somerville Ave., Somerville (Boston), Mass.
Toronto, Canada: United Steel Corporation, Ltd., Canadian Licensees

SERVICE

TRUCKS
CASTERS
AND
SPECIALLY
DESIGNED
LIFTING
AND
HAULING
UNITS

When inquiring specify CEP6191 — see information request blank, pgs. 2-3

It's the **ADMIRAL** now!
WAKEFIELD ACE DONS WAR CLOTHES



saves
Steel

... and it's "tops" to look at ... "tops" to see by ... for war plant office work

Designed to conserve war materials, THE ADMIRAL carries on for the Wakefield ACE. Provides diffused, high-intensity lighting, to speed vital paperwork; and saves almost enough steel, on each 4-lamp unit, to make a .30 cal. machine gun! Puts 90% of its light DOWN on desk-tops; with the rest to ceiling, to avoid harsh contrasts. New frame and louvers, built by cabinet-makers, use only selected first-grade wood; are anchored with metal and cemented with glue, to withstand humidity. Reflector, of Masonite reflector board, is highly efficient, thanks to 2 coats of infra-red enamel over one coat of primer. The ADMIRAL comes in 2, 3, 4 and 6-lamp units; can be interconnected on special order. Write for details.

THE **WAKEFIELD** BRASS
F. W. CO.

13 CHEMICAL PARK

VERMILION, OHIO

When inquiring specify CEP6192 — see information request blank, pgs. 2-3

Page 68

PRODUCTION

Hairguard Combines Style, Comfort

Covers all the hair, can be completely fire-proofed, adjustable to size, preshrunk, easily laundered



HAIRGUARD . . prevents entanglement, damage by fire, fumes, grease

Uses — Hair protection for women workers. Prevents hair becoming tangled in machinery or damage by fire, smoke, fumes, oil mists or sprays. Keeps hair free from dirt, grease and dust.

Features — Adjustable to size for perfect fit. Easily laundered and fire-proofed. Semi-rigid top helps to warn of inadequate head clearance.

Description — Made of ivory drill with green

lining. Non-inflammable, transparent acetate visor. Roomy enough to contain all the hair. Ivory color harmonizes with colored uniforms. Its lightness encourages frequent laundering which can be performed safely as material is preshrunk. Cap may be printed with company trade mark, safety slogan or any other lettering. A selection of five different models is offered. Literature illustrating all of these and containing complete information is available upon request regarding "StaSafe Hairguards."

STANDARD SAFETY EQUIPMENT CO., Dept. CEP,
232 West Ontario St., Chicago, Ill.

When inquiring specify CEP6193 — see information request blank, pgs. 2-3

Remote Hydraulic Control for Engine Test Cell Application

Transmits oscillating motion without mechanical linkage; no springs, no cups on pistons



HYDRAULIC CONTROL
locks in position

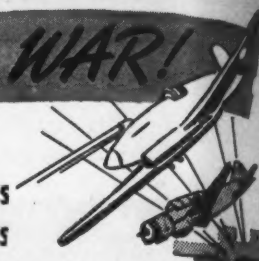
Uses — Designed for service on engine test cells for controlling throttle position and mixture where it is desired to remotely control the engine from the test boards without mechanical linkage.

Features — Positive hydraulic power in both directions, no springs, no cups on pistons. Pneumatic brake automatically locks control in any desired position.

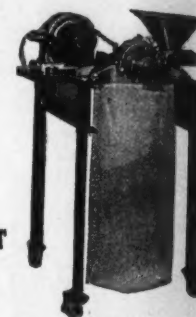
Operation — To operate depress button in control lever with thumb. This releases automatic brake. Move the control to any desired position, release the button and control is automatically locked in its new position, where it will remain indefinitely.

Description — Transmits the total force you apply to the control lever. There is no lost motion in either direction. No vent line. The hydraulic circuit is filled by operating

We're at WAR!



SKILLED MANPOWER IS
ONE OF OUR COUNTRY'S
MOST PRECIOUS ASSETS.
THE MIKRO-PULVERIZER
CAN BE OPERATED BY
UNSKILLED MEN OR
WOMEN—BY FEWER
MEN OR WOMEN.



FREE CATALOG—FREE GRIND TEST

A 32-page catalogue sent on request. And to back up the proof of the catalogue we'll make a sample grind of your materials—free.

PULVERIZING MACHINERY COMPANY
60 Chatham Road Summit, N. J.



When inquiring specify CEP6194 — see information request blank, pgs. 2-3

Cast Lead
FILTERS
for
ACID
Solutions



Rotary Drum Vacuum Type

The Swenson Cast Lead Filter is effecting substantial economies in the filtration of Glauber's salt, copperas, zinc sulphate, copper sulphate, and other crystalline materials from acid solutions. Swenson cast lead construction is virtually corrosion proof. Service records testify to long life with low maintenance and operating cost. Swenson Evaporator Co. (Div. of Whiting Corp.), 15667 Lathrop Ave., Harvey, Illinois.

SWENSON

EVAPORATORS • FILTERS • CRYSTALLIZERS

CHEMICAL EQUIPMENT PREVIEW

You can BUY TRI-CLOVER PUMPS and FITTINGS NOW

If you have the proper priority. The major portion of our manufacturing facilities is now devoted to war production. However, we are endeavoring to maintain a complete stock of Tri-Clover Sanitary Pumps—in Trialloy, nickel-plated bronze and stainless steel. Essential buyers with proper priority can get delivery. How long we can maintain complete stocks, we don't know. Production of war goods comes first, and will continue to come first, in our plants.

TRI-CLOVER MACHINE CO.
KENOSHA • WISCONSIN



When inquiring specify CEP6195 — see information request blank, pgs. 2-3

Sanymetal ALL-WOOD TOILET COMPARTMENTS

Complete with door hardware and partition fittings
NOW AVAILABLE—READY TO INSTALL



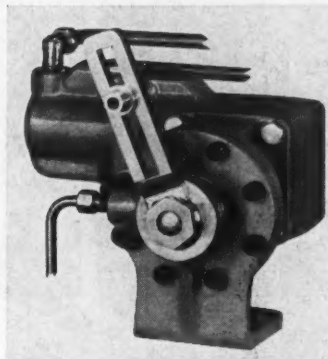
This is no time to risk the health and well-being of employees by setting up makeshift toilet facilities. Where adequate and modern toilet and washroom facilities are available lost time, from cases of minor illnesses, occurs less frequently. Sanymetal All-Wood Toilet Compartments provide conveniences, and a degree of sanitation, that are usually unknown, unappreciated, and overlooked by those who do not have years of specialized experience and skill to draw upon in building toilet compartments. Sanymetal Specialists have 27 years experience. For one thing, this means the elimination of dust-collecting and germ-collecting ledges and pockets. A makeshift toilet compartment may endanger the health of employees. Sanymetal All-Wood Toilet Compartments come to the job ready for immediate installation. On one order you include all the wood partitions and doors, posts and headrails, and all the hardware and fittings that are necessary to complete the installation. This avoids delays for assembling materials, or for experimental erection. Bulletin No. 900 gives complete specifications for Sanymetal All-Wood Toilet Compartments. Write for it today, but for quick action look under "Partitions" in your phone book for name of Sanymetal Representative in your locality. Lockers of plywood or tempered pressboard have been developed by Sanymetal Engineers. Your requirements can be met promptly. Write for Bulletin No. 920.

THE Sanymetal PRODUCTS CO., Inc. 1722 Urbana Rd.
Cleveland, Ohio

When inquiring specify CEP6190 — see information request blank, pgs. 2-3

PRODUCTION

the control lever from one extreme to the other. The



RECEIVER UNIT installed above or below hydraulic sender

inlet connection for the brake is ported at the top of the reservoir in the sending unit. This holds hydraulic pressure in the system equal to the air pressure and prevents air from being drawn into the hydraulic circuit by the vacuum produced by any unbalanced load. There are two hydraulic lines connecting sender and receiver, also one pneumatic line for the air brake. The sending unit is made for table mounting and the receiver can be installed above or below the sender. Sender lever can move 90 degrees and can be indexed to any desired position. Complete specifications on request, regarding this Type 550 Remote Hydraulic Control. A. W. CASH CO., Dept. CEP, Decatur, Ill.

When inquiring specify CEP6197 — see information request blank, pgs. 2-3

Blast Curtains Stop Flying Glass

Keep glass, debris from entering through windows, protects employees and equipment

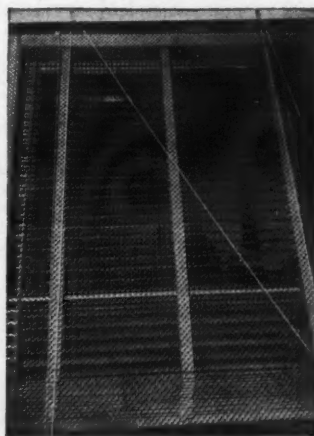
Uses — In industrial plants, office buildings and other structures to catch and stop flying glass resulting from bomb concussions. Now in wide use. Vital switchboards, transformers and instruments similarly protected.

Features — Protects workers inside buildings from flying glass and debris, among the most dangerous of explosion hazards. Roll up like Venetian blinds when not in service. Easy to install. Air, light penetrate readily.

Description — Woven of steel wire in a $\frac{3}{8}$ in. diamond shaped mesh. Several methods of attaching. One is by use of lag screws inserted through flat steel stretcher bar and mesh of curtain and turned tight into window frame. Curtain can be anchored at bottom by means of spring fasteners attached to bar parallel to window sill. Furnished in various widths up to 13 ft. and in convenient length. Descriptive literature sent on request.

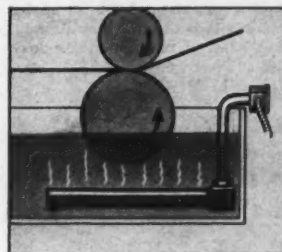
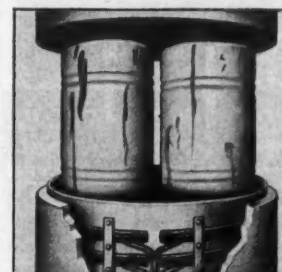
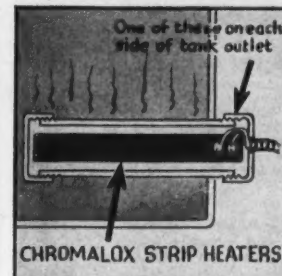
CYCLONE STEEL FENCE DIV., Dept. CEP, Waukegan, Ill.

When inquiring specify CEP6198 — see information request blank, pgs. 2-3



STEEL WIRE CURTAIN . . . rolls up like Venetian blind.

use Electric heat in processing asphalt compounds with **CHROMALOX** ELECTRIC HEATING UNITS



DRAWING ASPHALT FROM LARGE SUPPLY TANK without heating the entire contents of the tank, can be easily done by applying Chromalox units close to the tank outlet. A four-inch pipe is inserted through the tank wall on each side of the outlet, and welded into place. Chromalox strip heaters are placed within the pipe sections, which are then capped, becoming in effect small ovens delivering only the required temperature to keep the asphalt fluid around the outlet.

REMOVING ASPHALT FROM DRUMS is sometimes done by placing the drums bottom up and with covers removed, resting on steel cross bars in an electrically heated tank, so asphalt will run out of drums. Chromalox strip heaters clamped to sides and bottom of the tank supply the heat. Insulating material is placed round the tank, and a cover provided. The outlet pipe from the tank or kettle, may lead down to the floor below where the asphalt compound is applied.

TO HEAT PIPE CARRYING ASPHALT, Chromalox strip heaters curved in cross-section to fit along the pipe, may be clamped against the pipe and covered with an outer blanket of insulation. This prevents the asphalt "freezing" in the pipe.

APPLYING HOT ASPHALT TO ROOFING MATERIAL is often done by a roller partly immersed in the asphalt solution, which is kept at the correct consistency by a Chromalox electric immersion heater of required capacity. The roller too may easily be heated electrically in spite of its rotation, by strip heaters clamped to its inner surface, wired to commutator rings in contact with brushes, at one end of the roller. Only with electric heat is it possible to heat a moving part so simply.

Many other applications besides those above are in use, and our engineering staff will be glad to help you select the right one for your particular problem. Write us—and for valuable electric heat data, mail the coupon with your business letterhead.

EDWIN L. WIEGAND COMPANY
7517 Thomas Blvd. Pittsburgh, Pa.

Send me the CHROMALOX CATALOG OF ELECTRIC HEAT

Name _____ Position _____ 1

When inquiring specify CEP6199 — see information request blank, pgs. 2-3

Plan

FUTURE MATERIAL HANDLING REQUIREMENTS

with The "HAMMOND"

Screw-Lift and Screw-Veyor

This ultra-modern means of conveying offers savings in space plus high efficiency, dust and moisture tightness. Handles wet or dry materials on a horizontal, inclined or vertical plane, quietly and at higher speeds. Its tubular construction enables precision operation, great accessibility, avoidance of material breakage, and many other advantages. The Screw-Veyor conveys horizontally or on any incline. The Screw-Lift conveys vertically to any height.

WRITE NOW for detailed information relative to this unique, cost-saving and versatile conveying system. Ask for Analysis Form M-500-2.

U.S. Pat. No. 2260811-
2260812-2279201

Other U.S. and Foreign Patents Pending

Screw Conveyor Corporation
699 HOLLMAN ST. HAMMOND, IND.
SCREW CONVEYORS HAMMOND ELEVATOR BUCKETS
TRADE MARK REG. PRODUCTS U.S. PAT. OFFICE

When inquiring specify CEP6200 — see information request blank, pgs. 2-3

A SWEEPER TO BLITZ YOUR SWEEPING JOBS

Here is one piece of equipment, the equal of a whole crew of sweepers—to blitz your cleaning problems. . . . Consistent with modern shop practice, men with brooms are rapidly being replaced with this mechanized method. One MOTO-SWEEPER can do the work that formerly required many men—releasing them to help speed the wheels of production. And relieving still further the burden of non-productive labor. . . . Efficient, rugged and easy to operate, in large or small areas—it turns right or left under its own power by means of a separate clutch on each wheel of the tractor, controlled at the handlebar (patented) . . . Send for catalog and complete information. . . . 3 models (two motorized) . . . prompt deliveries on high priorities.

THE MOTO-MOWER COMPANY
Industrial Sweeper Division
4586 WOODWARD AVENUE • DETROIT, MICH.



When inquiring specify CEP6201 — see information request blank, pgs. 2-3

PRODUCTION

Ball Bearing Swing Joints Save Rubber in Flexible Pipe Lines

Wide variety of sizes and styles to meet needs in vacuum or pressure lines to 3000 lbs.

Uses—These ball bearing swing joints are designed to give continuous flexibility to pipe lines. Adapted to a great variety of requirements that in past entailed use of rubber. For handling alcohols, acids, alkalies, oils, and numerous processing uses in chemical plants.

Features—These joints have special packing units—not effected by acids, alkalies. Full 360 degrees rotation is provided in 1, 2 and 3 planes, each swivel turning on double rows of steel balls. In addition to providing easy turning, these balls serve to maintain the joints in perfect alignment and also maintain a pre-regulated load upon the packing unit. This permits the use of these swing joints on either vacuum or pressure lines. No packing glands or stuffing boxes are required and therefore there is nothing to tighten or adjust.

Description—Joints manufactured in over 500 different types, styles and sizes, 3/8 in. to 12 in. Supplied for all services from vacuum to 3000 pounds working pressure of 500 pounds. Standard connections are: threaded, flanged or bored for welding.

CHIKSAN TOOL CO., Dept. CEP, 233 Pomona Ave., Brea, Cal.

When inquiring specify CEP6202 — see information request blank, pgs. 2-3

Rubber Lung Designed for Safe, Stimulation of Normal Breathing

Adapted for treatment to restore suspended breathing from shock, fumes, gases and other causes

Uses — Designed to supplement and increase the effectiveness of Schaeffer prone pressure treatment to restore breath-



RUBBER LUNG RESPIRATOR

PROTECT YOUR WORKERS

Prevent costly accidents—
lost time—interrupted schedules



Write for this Safety Catalog!

Illustrates and describes safety equipment for every hazard, every occupation, every industry. Pulmosan Safety Equipment Corp., Dept. EP, 176 Johnson St., Brooklyn, N. Y.

PULMOSAN

"Everything for Industrial Safety"

When inquiring specify CEP6203 — see information request blank, pgs. 2-3



CAN'T GET 'EM UP in the morning!

It's those luxuriously comfortable beds at all
DEWITT OPERATED HOTELS

In Cleveland In Columbus
HOTEL HOLLENDEN NEIL HOUSE
In Lancaster, O. In Corning, N.Y.
THE LANCASTER THE BARON STEUBEN

Check IN
THEO. DEWITT PRESIDENT
DEWITT OPERATED HOTELS

When inquiring specify CEP6204 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

PROBLEMS IN MIXING AND BLENDING?

The PATTERSON CONICAL DRY BLENDER

Easy as "1-2-3"
WHEN YOU USE THIS
PRODUCTION MACHINE



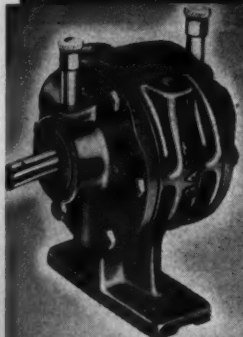
Five-Minute blending seems incredible, but it is achieved in this remarkable Patterson unit. The whole story is yours for the asking.



THE PATTERSON FOUNDRY & MACHINE CO.
EAST LIVERPOOL, OHIO - U. S. A.

When inquiring specify CEP6205 — see information request blank, pgs. 2-3

Solve EXPLOSION-PROOF problems with GAST AIR MOTORS



SPECIAL ADVANTAGES OF GAST AIR MOTOR

- No reciprocating parts or springs.
- Automatic take-up for wear.
- Low maintenance—cannot be burned out.
- Positive starting in any position.
- Exceptional compactness for power developed.

GAST

ROTARY AIR
MOTORS & PUMPS

When inquiring specify CEP6206 — see information request blank, pgs. 2-3

★ COST MUCH LESS

Than explosion-proof
electric motors

★ VARIABLE SPEED

over a wide range
Up to 3,000 R.P.M.

★ PROMPT DELIVERY

On explosion-proof applications where compressed air is available, the Gast Air Motor provides power at much lower first cost and practically no service cost (based on 7 year record).

The Gast Air Motor is particularly applicable to war-production jobs such as driving mixing equipment in munitions plants, process industries, etc. It delivers from 1/20 to 1 H.P.

Because it employs the same Rotary principle as the famous Gast Air Pumps, the Gast Air Motor offers the same economy and long life advantages.

Write for FREE Catalog on
GAST AIR MOTORS — PUMPS
— COMPRESSORS

Contains full descriptions, engineering data, and many application photographs on the complete Gast line which includes 12 sizes, Gast Rotary Air Pumps, 1/2 to 23 C.F.M. Pressures up to 30 lbs.

GAST MFG. CORP.
101 Hinkley Street
Benton Harbor, Michigan

PRODUCTION

ing suspended through shock, fumes, gases or related causes.

Feature — Does not force air in and out of lungs but is designed to stimulate action of body muscles, helping them function as required for breathing until such assistance is not needed.

Description — The device is strapped to the back or stomach of the victim and adheres to the body through suction. Raising and lowering the handle of the lung at normal breathing rate activates the muscles causing them to draw in and exhale air. May be used safely by inexperienced person as there is no danger of harming patient. The important point to be observed is careful maintenance of rhythm as close to normal breathing as possible. Literature containing complete detail is available on request.

E. D. BULLARD CO., Dept. CEP, 275 8th Ave., San Francisco, Cal.

When inquiring specify CEP6207 — see information request blank, pgs. 2-3

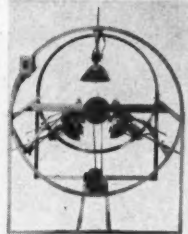
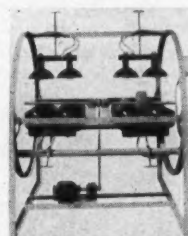
Polishing Wheels Reheaded, Dried in Infra-Red Oven All in 1 Hr.

Quick internal drying action provides increased
production without additional wheels

Uses — For drying polishing wheels after application of "head."

Features — Dries wheels in 30 minutes as compared with 24 hours usually required in ovens. Permits use of same wheels more than once in a single day. Compact design saves space.

Description — Unit is portable and will accommodate a large number of wheels. Unit is usually sold with casters. Lights, motors, sprockets, gear reducers and other parts of mechanism are suspended in a welded steel frame. Oven may be enclosed in sheet steel. The 12 gold-plated reflector lamps — 240 watts, 115 volts each — are adjustable to any distance from the wheel. Special bushings provide for mounting wheels of various diameters on the drying shaft, which is usually 1 in. in diameter. Two control switches for adjustable lamps. Motor, 1/6 HP, single phase, 60 cycle, 1725 RPM. Speed reducer 60/1, working speed of shaft approximately 12 RPM. Can be regulated to give other speeds. Pillow block bearings — shaft 24 in. loading space in each direction. Unit is 54 in. square, 66 in. high. Working height of loading height is 24 in. from floor. Manufacturer also produces cement for reheading. This Infra-Red unit is known as the "Park Dryer." Complete details of applications of equipment to specific problems on request.



POLISHING WHEEL
DRYER...frame can be
inclosed in sheet steel

PARK CHEMICAL CO., Dept. CEP, Military Rd. & Vancouver Aves., Detroit, Mich.

When inquiring specify CEP6208 — see information request blank, pgs. 2-3

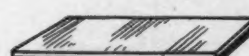
For complete information regarding products described in this issue a handy request slip is provided between pages 2 and 3. Check the items that interest you, fill in name and address and send it to publishers. Information will come to you promptly.

Conserves VITAL ALLOYS

Silver-Ply*
STAINLESS-CLAD STEEL
makes available 5 times (or more)
stainless surface



• This much stainless steel if rolled into a plate of Silver-Ply (20% cladding) saves 80% in vital chrome and nickel and makes available this much more stainless surface.



• Jessop Silver-Ply* Stainless-Clad Steel conserves vital alloys, because just the right thickness of stainless steel is used to obtain the required protection from corrosive action.

Silver-Ply is acid-resistant and stain-free, and offers the same protection on the clad side as solid stainless. It saves in material costs and is easier to fabricate.

Silver-Ply is produced in all degrees of cladding from 5% to 50% and in any of the standard analyses of stainless steel. Write today for descriptive folder. Jessop Steel Company, Washington, Pennsylvania.

*Manufactured under U. S. Pat. Nos. 1,997,538 and 2,044,742.



Awarded for outstanding production achievement.

JESSOP STEELS

CARBON • HIGH SPEED • SPECIAL ALLOY • STAINLESS • COMPOSITE STEELS

When inquiring specify CEP6300 — see information request blank, pgs. 2-3

Northern HI-LIFT HOISTS... 168-Hour Week Workers

They stay on the job because they have the strength and construction quality. One piece welded frames—turned and ground shafts—large size roller bearings—machine cut heat treated gearing—splash lubrication. All parts readily accessible for maintenance that usually isn't needed.

Hi-Lift feature makes better use of headroom—capacities 1000 lbs. to 15 tons.

Write for
Literature



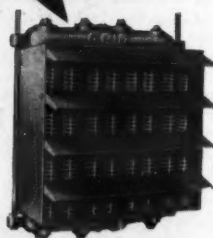
NORTHERN ENGINEERING WORKS, 2605 Atwater St., Detroit, Mich.

CRANES Northern HOISTS

When inquiring specify CEP6210 — see information request blank, pgs. 2-3



HERE'S
Your Copy
to help you
Solve Heating
Problems



It describes fully, with capacity tables, the GRID Unit Heater now made with high test cast iron heating sections, to cooperate with the war effort in conservation of materials. The Cast Iron GRID Unit Heater is engineered and constructed for dependable service and long life — a special design for performance. . . . Patent applied for. Free from corrosion, leaks or breakdowns — no electrolysis as only one type metal is in contact with steam or hot water. Will withstand up to 250 lb. steam pressure. Write for your copy now.

D. J. MURRAY MFG. CO.
WAUSAU, WISCONSIN
Offices in Principal Cities.

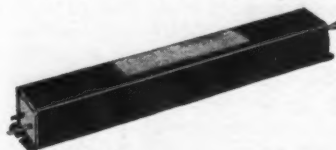
GRID UNIT HEATER

When inquiring specify CEP6211 — see information request blank, pgs. 2-3

PRODUCTION

Ballast for Uniform Lighting of Four Lamp Fluorescent Units

Core, coil elements impregnated and compounded to minimize resonant vibration, reduce sound level



BALLAST—minimizes resonant vibration

Uses — This lamp ballast is designed to provide equalized and balanced secondary voltage to each of four 100 watt fluorescent lamps. Designed to assure all four lamps lighting at the same time providing starters and switches are in good order without drag, delay or flashing.

Features — Special care is used in the manufacture of these ballasts to minimize by impregnation and compounding the normal magnetic action of core and coil elements. Normal resonant vibration is minimized and sound level thus reduced to a negligible point.

Description — Circuit voltage 250-280. Dimensions 25/8 high, 3 1/16 wide, 19 1/4 long (inches). Mounting centers 18/8 x 2. Approximate weight 17 lbs. Approximate watt loss 35. Approximate power factor 90-98. Ballast is identified as M-100-25. Descriptive bulletin containing illustrations and specifications of this and a complete ballast line available on request. Specify Bulletin 157.

ACME ELECTRIC & MFG., CO., Dept. FEP, Cuba, N. Y.

When inquiring specify CEP6212 — see information request blank, pgs. 2-3

Glass Block, Molding Strips for Demountable Interior Partitions

Combines quick and easy installation with transparent, decorative features

Uses — Provides a completely packaged demountable interior wall partitioning system that combines easy installation, the characteristic transparent properties and appearance of glass block and great adaptability to a wide variety of requirements.

Features — Great economy as partitions are easily installed and all material is completely salvageable. Average workman can perform job after brief study of detail sheets.

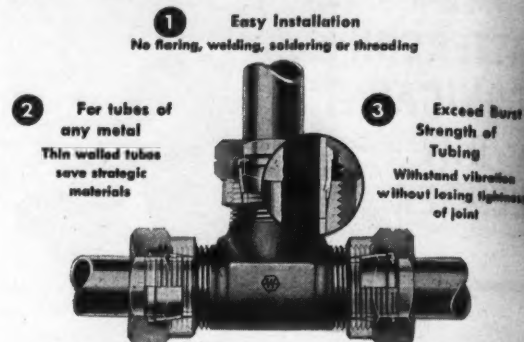
Description — Wall construction consists of manufacturer's regular glass blocks, held in place by newly developed separating strips of wood, painted or stained to harmonize with surroundings. The horizontal molding strips are



FLUTED STRIPS AND WEDGES . . . hold glass blocks firmly together

ERMETO FITTINGS

3 outstanding advantages

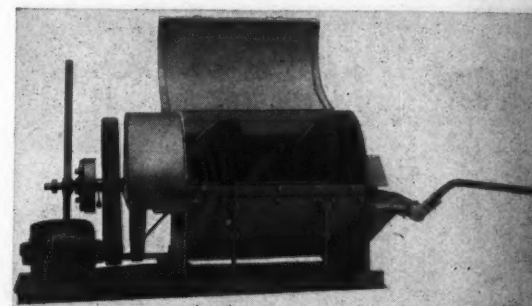


Ermeto fittings meet every demand of engineer and designer for a tube coupling that will withstand high pressure and extreme vibration. If the tubing will carry the pressure Ermeto will hold it. Write for complete details.

THE WEATHERHEAD COMPANY, 300 E. 131st St., Cleveland, Ohio



When inquiring specify CEP6213 — see information request blank, pgs. 2-3



Here's a Mixer that is fast and efficient —read the description

Cut shown has end discharge Number 1. It can be had in either end or side discharge. Number 2 — all bearings guarded and SKF bearings are used. V-Belt motor drive or geared head motor drive. Number 4 — rubber sealed cover to keep any dust from escaping. Discharge door — Number 1 rubber sealed. Built in capacity from 5 to 60 cubic feet.

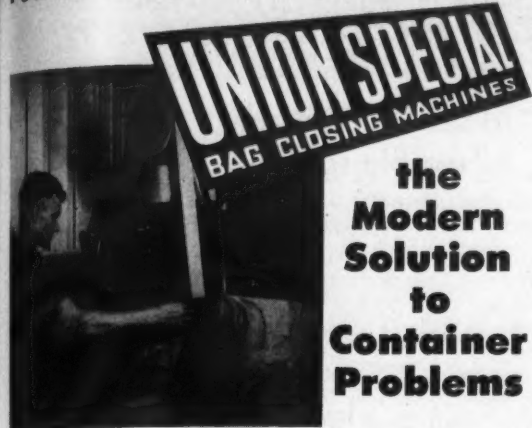
Write for full information

The Multiplex Concrete Machinery Co.
Elmore, Ohio

When inquiring specify CEP6214 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

FOR ALL SIZES and TYPES OF BAGS



the Modern Solution to Container Problems

IN their effort to meet the demand for new types of shipping containers, countless manufacturers of a wide variety of products have discovered the advantages of bags. Union Special will welcome the opportunity to make recommendations for a bagging set-up to meet your specific needs. With over 60 years experience in the field Union Special is able to furnish bag closing machines to handle virtually every bag closing requirement on all types and sizes of bags — fabric or paper. Send details on your problem and we will furnish you with full details on the right set-up for your job.

UNION SPECIAL MACHINE COMPANY
442 North Franklin Street • Chicago, Ill.

When inquiring specify CEP6215 — see information request blank, pgs. 2-3



Even with a Green Operator—

You could start a green man every morning without a moment's worry over the safety of your bearings—

If they were protected by a Farval Centralized System of Lubrication.

With no expert attention Farval Centralized Systems will protect you in advance against disastrous

shut-downs due to faulty lubrication. A few strokes of the Central Pumping Unit gives every bearing the amount of lubricant it requires and—not a bearing is missed.

Farval increases machine production hours. In less than one minute and while the equipment is in full operation, complete lubrication is obtained in perfect safety from the floor.

Farval enables you to return used equipment to profitable service. With bearings properly lubricated, even the older machines are able to carry the load.

Why not protect your equipment against the hazards of the Green Operator? Install Farval!

The Farval Corporation, 3257 East 80th St., Cleveland, Ohio.

Affiliate of The Cleveland Worm & Gear Company,
Automotive and Industrial Worm Gearing.

In Canada: PEACOCK BROTHERS LIMITED

FARVAL CENTRALIZED
SYSTEMS OF
LUBRICATION

When inquiring specify CEP6216 — see information request blank, pgs. 2-3

JANUARY-FEBRUARY, 1943

PRODUCTION

used in lengths to accommodate and support a row of blocks to the number convenient or necessary. Strips used between the blocks vertically are, of course, block height. The strips interlock with the blocks by reason of their ridged faces which fit into the flutings on the edges of the blocks. Notched ends of the vertical moulding strips interlock with the horizontal moldings. The whole panel is locked firmly in place by prefabricated wood wedges installed at the ends of each course of blocks. In completing this part of the installation a wood frame (A) is first erected. The wall of glass block is then set up using horizontal molding strips (B) and vertical strips (C). Prefabricated paired wedges of wood, (D) are used as follows: one half of each pair is nailed to frame and the other is then tapped into place. When all wedges are complete the wall is held securely. Almost any size wall may be constructed. Walls may extend from floor to ceiling or in various lesser heights. This glass wall construction may be combined with existing solid or framed partitions.

OWENS-ILLINOIS GLASS CO., Insulux Div. Dept. CEP, Toledo, Ohio.

When inquiring specify CEP6217 — see information request blank, pgs. 2-3

Water Wash Spray Booth Uses Low Pressure Pump; Nozzles Eliminated

Single or multiple units with "super-turbulent" washed walls, turntable, fluorescent light

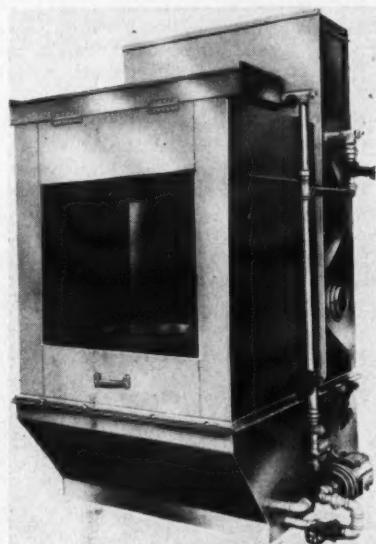
Uses — To provide great efficiency in spraying operations of all sizes and types and protect employee health, reduce fire hazards to negligible minimum.

Features — Manufacturers emphasize that the absence of spray nozzles eliminates possibility of clogging. Minimum servicing requirements due to elimination of moving parts. High pigment reclamation.

Description — Booth has rear and side water impingement walls. Continued and effective pressured flow. Used water may be drained directly or pumping can be arranged for distant disposal. Unit illustrated equipped with turntable and fluorescent lighting. Available in single or multiple units. Other sizes and designs embodying the same "super-turbulent" feature are available for varying requirements. Detailed bulletins describing these "Aqua-Resistor" booth available upon request.

MAYER MFG. CORP., Aqua-Resistor Div., Dept. CEP, 45 Division Pl. Brooklyn, N. Y.

When inquiring specify CEP6218 — see information request blank, pgs. 2-3

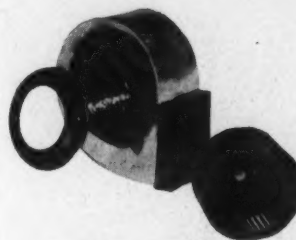


SPRAY BOOTH . . . rear and side water impingement walls

NEW GOODALL PRODUCT

Synflow

LINING



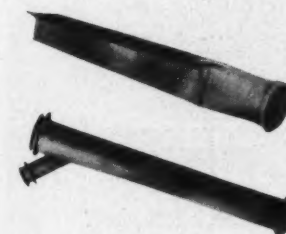
24" Multivane Fan Exhaustor and Rotor lined with SYNFLOW

WHERE it's used:

Practically every type of metal, ceramic, or concrete process handling equipment can be lined with "SYNFLOW." Badly pitted surfaces offer no problem as long as they can be cleaned.

Chemical Plants: Tanks, pails, dippers, pipe fittings, valves, coils, pumps, exhausters, mixing propellers, agitators . . .
Oil Refineries: Acid sludge, digesters, steam curing kettles . . .

Filter trough lined with SYNFLOW



Van Stone fume duct lined with SYNFLOW

HOW applied:

"SYNFLOW" lining equipment can be brought right to your door! If it is not practicable to ship your job to the factory, we can have a sleeper-cab truck at your door almost anywhere in the United States within a few days. These trucks are completely outfitted even down to a portable sand blasting unit where necessary. Trained mechanics will finish your job in jig time and take care of all health and safety requirements.

Complete information on "SYNFLOW" will be furnished upon application to our main office:

GOODALL
RUBBER COMPANY INCORPORATED

15 So. 36 Street

Philadelphia, Pa.

When inquiring specify CEP6219 — see information request blank, pgs. 2-3

WHAT it is:

GOODALL "SYNFLOW" is a synthetic rubber compound in a heavy liquid or plastic state, that can be applied to surfaces of almost any shape or size. Any desired thickness and durometer reading can be built-up. Adhesive to cast iron or steel is 600 p.s.i.; on alloys, such as brass and aluminum, 450 p.s.i.



Intricate chemical feeder lined with SYNFLOW

Metal Working: Inside and outside of pickling tanks, dippers, baskets, electrolytic tanks, anode and cathode supports . . .
Mining: Mine pipe lining.
Paper Mills: Beater tanks, up-flow spreaders on Fourdrinier machines, sloop chests, outside sludge tanks.

Other Plants: Wherever a rubber-like covering or lining is desired on equipment.

PARSONS
OVAL BAG
DUST
ARRESTORS

CLEARING
the COBWEBS
from the Air!

Parsons Oval Bag Dust Arrestors with their many exclusive patented features cleans the air thoroughly of all dust and dirt and converts a dreary, foggy plant into a real bright, pleasant place to work.

Write in for free catalog "Mastery of the Air"

PARSONS ENGINEERING CORP.
CLEVELAND, OHIO

When inquiring specify CEP6220 — see information request blank, pgs. 2-3

45ths
of the Y.M.S. MINESWEEPERS
DEPEND ON Westco PUMPS
for BOTH fresh and salt water supply

...and they are equally efficient in YOUR plant!

When fighting ships put to sea, they can't take chances with equipment breakdowns. Particularly in smaller vessels where repair facilities are limited and there's no room for standby equipment, absolute dependability is VITAL!

That's why it is doubly significant that in four out of every five YMS Minesweepers, Westco Pumps have been given the job of handling BOTH fresh and saltwater supplies. In addition, Westcos are going into Troop Ships, Sub-Chasers, Tankers, Coast Guard Cutters, and other naval vessels.

What better testimony is there to the amazing stamina, high efficiency, and rugged dependability built into Westco Pumps?

TAKE A TIP FROM THE NAVY. When you buy pumps for YOUR plant, remember—you can't beat Westco performance!

On Westco Pumps, wear and corrosion are taken by renewable liners. To renew pump, simply renew liners!

POMONA PUMP CO.
WESTCO DIVISION
2621 LOCUST STREET • ST. LOUIS, MISSOURI

POMONA PUMP CO. is a division of JOSHUA HENDY IRON WORKS

When inquiring specify CEP6221 — see information request blank, pgs. 2-3

Equipment for Production

Complete Portable Brush Plater

Includes brushes, cleaner, brush, paddle anodes, outlets for two operators, DC converter available

Uses — For plating tanks, vats, sterilizers, freezers, wrapping, filling, sealing machines and similar equipment without dismantling. Various metals such as tin, zinc, copper, cadmium or silver may be applied.

Features — Unit is easily portable. Two sets of outlets permit two workers to use machine at the same time. Operations performed in short time.

Description — Power unit weighs only twenty-eight pounds. It consists of a power pack delivering from 1 to 25 amperes at 2 to 10 volts and operates on 110 v., 60 c. AC. Can be fitted with converter for DC. All necessary preparation materials such as brushes, cleansers are included with the unit and a gallon of selected metallic plating compound is also supplied, together with a full set of brush and paddle anodes to apply the plating.

CONSOLIDATED EQUIPMENT INC., Dept. CEP, 4621 W. 20th St., Chicago, Ill.

When inquiring specify CEP6222 — see information request blank, pgs. 2-3

Alloy Steel Acid-Resistant Fans

For heavy duty to 1600 F., wheel sizes 12 - 48 in.; capacities up to 20,000 cfm

Uses — For all heavy duty, high volume requirements involving temperatures to 1600° F. Handle chemical gases, fumes, special atmospheres, vapor, foundry dust.

Features — Precision balanced. All steel welded construction throughout.

Description — Eleven sizes are available ranging from 12 in. diameter to 48 in. diameter wheels, handling total pressures up to 10 W. G. Outlet can be arranged in 16 standard positions. Belt-drive (tex-rop) used on all models, while wheel is overhung. Shaft supported on two large air cooled bearings. Device dissipates heat from shaft before it reaches bearings. Fan wheel, shaft easily removed without disturbing housing. Various alloy steel are used: 18-18-25, Monel, Inconel. Black iron for low temperatures not involving corrosive fumes.

DESPATCH OVEN CO., Dept. CEP, Minneapolis, Minn.

When inquiring specify CEP6223 — see information request blank, pgs. 2-3



NON-CORROSIVE FANS . . made in alloy steels

Multi-Purpose Hydraulic Press Adaptable to Special Operations

100 ton capacity; suitable for either small lot or production line work

Uses — Designed for widely varying operations in fields of assembling, pressing and straightening. Designed to make it suitable for either small lot or production line work.

Features — Readily adaptable for special operations by means of the alteration of certain key parts. Streamline design, eliminating sharp corners and projections. Choice of manual or electric control.

Description — Press is of 100 ton capacity. Frame is of welded steel construction while the cylinder assembly consists of cast steel. The



ram is of ground and polished steel fitted with a guide head operating in the ram guides on the inner sides of the press. The unit is available with either a guided platen or a threaded ram. Maximum stroke of ram is 18 in. and maximum throat opening is 18 in. Vertical opening is 36 in. It has a working pressure up to 2000 lbs. per sq. inch. Width at base 64 in., depth 40 in. Overall height 11 ft. 6 in. Utilizes oil for transmission of power. Variable adjustment of tonnage exerted by ram from 10 tons to full capacity by separate tonnage control. Designated by manufacturer as model DLOS2-100 Hydraulic Press.

DENISON ENGINEERING CO., Dept. CEP, 1152 Dublin Rd., Columbus, Ohio.

When inquiring specify CEP6224 — see information request blank, pgs. 2-3

New Cutter Forms Used in Tube Cleaners to Prevent Trackage

Cutters of heat, abrasive resisting bar steel; motor serviced without special tools



CUTTER OF TUBE CLEANER.

designed for thorough action without tracking

Uses — For cleaning boiler and heat transfer tubes avoiding the injury commonly experienced in performing such operations. Applications in chemical, food and petroleum fields.

Features — Special cutter form to give thorough cleaning

CHEMICAL EQUIPMENT PREVIEW

PRODUCTION

of tube walls without tracking. Repeated cleanings may be made with same protection to tube walls maintained. Cleaner motors ground to slip fit may be taken apart and re-assembled without special tools. Special power seal in motors for greater effectiveness.

Description — Selection of heads to provide effective cleaning of straight and bent tubes including expansion head for straight or slightly bent tubes. In P-type renewable pin plates are used. Brush head type employs a patented segment designed for unusual long life. Tufts are in solid metal base. Cannot be pushed out. Other heads are especially adapted for tubes or sharper bend. Cleaners are made for every scale or coke condition in tubes 1/2 in. to 20 in. OD. Maker also features tube expanders developed especially for oil refinery applications feature a special ironing out attachment which is secured to mandrel and has micrometer adjustment. Bulletin 19 available on request.

AIRETOOL MFG. CO., Dept. CEP, Springfield, Ohio.

When inquiring specify CEP6225 — see information request blank, pgs. 2-3

Alcohol Fires Extinguished by Carbon-Dioxide Foam Blanket

Used through generator; applied through tank connections or through hose



POWDER FORMS FOAM . . . when placed in generator and carried through water stream

duced from powder forms a smothering blanket that snuffs out flames in alcohols and numerous similar liquids. This blanket is made up of millions of minute, tough bubbles containing carbon dioxide gas. Foam stays in place despite fire draft, preventing re-ignition or reflash. Foam coats and insulates any burning surface, liquid or solid, vertical or horizontal, according to maker. Poured into any single powder generator and carried through a water stream powder generates this effective foam. Applied at time of fire through fixed connections on storage tanks or directed through hose and nozzle it cuts off the supply of oxygen necessary to support combustion. Named, "Alco-foam" and is approved by both Underwriters' and Factory Mutual Laboratories.

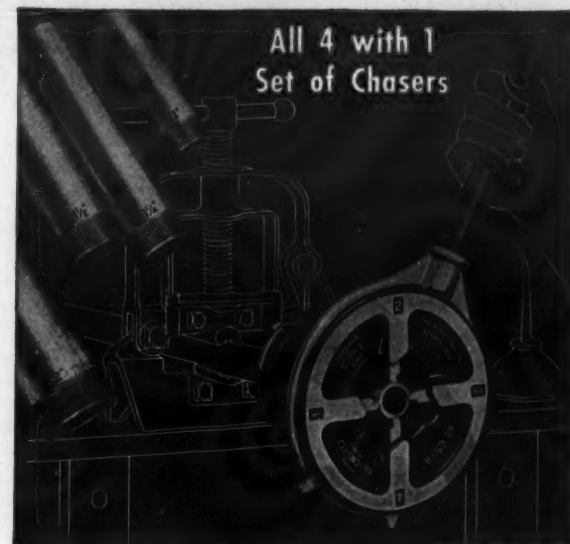
AMERICAN-La FRANCE-FOAMITE CORP., Dept. CEP, Elmire, N. Y.

When inquiring specify CEP6226 — see information request blank, pgs. 2-3

Uses — Especially designed for the extinguishment of alcohol fires. Effective on ketones, esters, ethers and also on petroleum fires.

Features — Foam generated floats on the lightest surface.

Description — Product developed to extinguish alcohol fires, considered one of the most difficult to combat. Foam produced from powder forms a smothering blanket that snuffs out flames in alcohols and numerous similar liquids.



All 4 with 1 Set of Chasers

Perfect THREADS

Faster and Easier with this self-contained

RIGID No. 65R

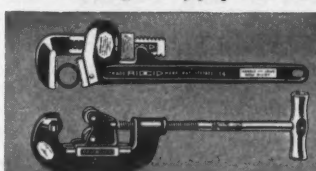
THEADS you cut with this remarkable No. 65R are clean, sharp and of micrometer accuracy—in all 4 sizes, 1" to 2"—a new quality in a self-contained die stock. But you'll like also the easy floating cutting



No. 65-R, ratchet and plain, one and two handle, cam or plate type workholders.

All RIGID Pipe Tools are sold through Supply Houses

action, the 10-second change to pipe size, the instant mistake-proof work-holder without bothersome bushings. It's a rugged steel and malleable tool with high-speed steel and chaser dies, assuring you long trouble-free service. It pays you to ask your Supply House for the RIGID 65R.

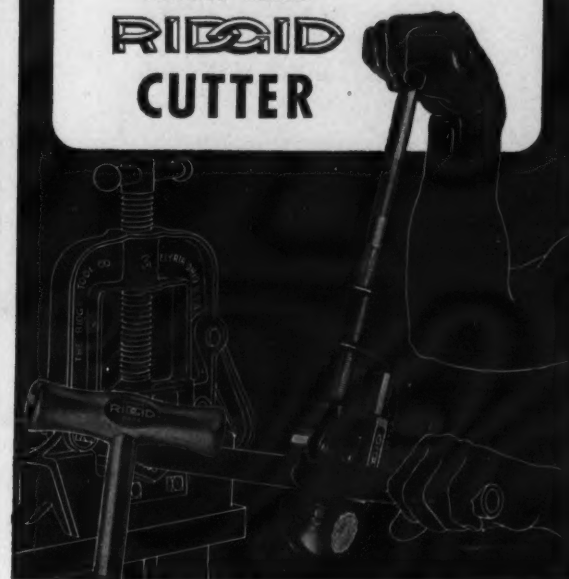


RIGID

★ PIPE TOOLS ★

Fast-Working Tools for War.
and the Busy Peace that's Coming

When you cut pipe,
Cut Time and Work, too
with this
RIGID
CUTTER



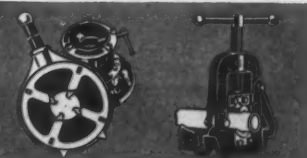
REASONS why RIGID Cutters roll more quickly and easily through all kinds of pipe are in the design of the tools. The thin-blade wheel, for instance, coined from

tool steel and assembled in steel-bushed hub, makes an unusually speedy clean cut. Heavy-duty cutter frames are warp-proof, always cut true, are nicely balanced for easy work. 6 sizes for pipe from 1/8" to 6". Also No. 42, 4-wheel short handle for cutting in close quarters. Ask your Supply House.



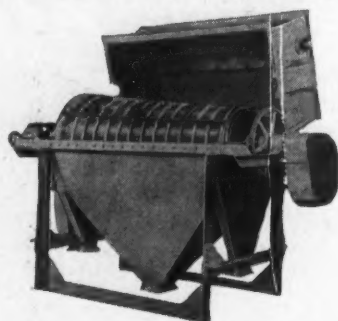
RIGID Tubing Cutter, with rolls—also cuts thin wall conduit.

THE RIDGE TOOL COMPANY
ELYRIA • OHIO • U.S.A.



When inquiring specify CEP6227 . . . see information request blank, pgs. 2-3

DUST-PROOF FORCED BOLTING MACHINE



This machine is built primarily for dust-proof bolting of products that are lumpy or difficult to bolt.

Rugged in construction and efficient in its operation, the unit has proven applicable in numerous bolting problems.

Send us details of your requirements and ask for complete information. Write:

SPROUT, WALDRON & COMPANY, INC.

181 Sherman Street Muncy, Pennsylvania

Engineers — Designers — Manufacturers

Since 1866

When inquiring specify CEP6228 — see information request blank, pgs. 2-3



***to MEET YOUR REQUIREMENTS**
Available in a variety of types and sizes, Owen rehandling buckets are particularly adapted for work with bulk chemicals.

Proper weight distribution and special shell curvatures assure capacity loads and rapid dumping action. Write for catalog.

The OWEN BUCKET Company
7080 Breakwater Avenue • Cleveland, Ohio
BRANCHES: NEW YORK PHILADELPHIA CHICAGO BERKELEY, CAL.



When inquiring specify CEP6229 — see information request blank, pgs. 2-3

PRODUCTION

Non-Toxic Degreaser — Cleaner for Machinery, Parts, Floors, Walls

Specified free from alkali, acids, solvents and abrasives; non-inflammable, quick acting

Uses — As a cleanser and degreaser for wide variety of plant equipment and machinery. Removes cutting oils and greases. In service in paper, textile, metal, tobacco, drug, beverage and food plants. Effective in cleaning walls, cement and painted surfaces. Can be used on leather belting.

Features — Manufacturer's specifications show product to be free from alkali, acid, grit, solvents and free fats or oils. Non-inflammable. Non-toxic — can be used on hands to remove grease.

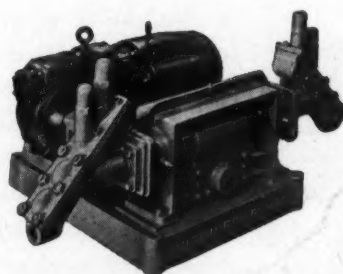
Description — General procedure is to make solution of one part of degreaser to ten parts of water. Period of immersion in bath is customarily but a few minutes. Necessity for rinsing determined by type of oil removed and process which follows degreasing. Light bodied oils removed in cold or warm solutions. Heavy oils require solution temperature of 180 degrees F. Wipe system is often preferable in handling small parts. Degreaser is made in additional formulas Numbers 2 and 3 for applications involving very heavy accumulations and stubborn cases. Complete information regarding specific degreasing problem available on request.

PENETONE CORP., Dept. CEP, 80 York St., Brooklyn, N. Y.

When inquiring specify CEP6230 — see information request blank, pgs. 2-3

Step-Valve Synthetic Latex Pump

Volume closely controlled by plunger-strokes adjustment; turbulence held to minimum



LATEX PUMP . . volume adjustable from maximum to 1 qt. per hr.

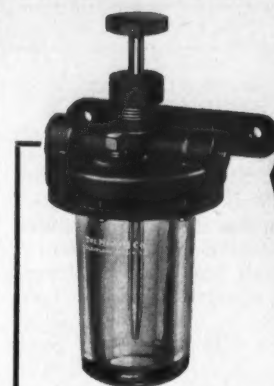
20,000 psi in high pressure synthesis. Used in major rubber company plants.

Features — Close plunger stroke adjustment for precise control of volume of latex handled from maximum rate to quart per hour. Designed for self-cleaning, non-clogging performance.

Description — Typical step-valve design with double ball checks but modified slightly to enable the latex to be handled with minimum of turbulence. Discharge checks spring loaded for instant, positive seating. Designed to utilize the suction pressure, present in the butadiene-stryene mixing vessel, and pump against a greater pressure on the discharge end. Cleaning not required except after shutdown of hour or more. Available in capacities up to 3000 gph.

MILTON ROY PUMP CO., Dept. CEP, 1380 E. Mermaid Ave., Philadelphia, Pa.

When inquiring specify CEP6231 — see information request blank, pgs. 2-3



NEW
MERIAM
SIGHT FEED
BUBBLER FOR
Purging LINES
AND OTHER
APPLICATIONS



★ Widely used for purging lines and for operating tank liquid level gauges . . . also in chemical processing, with different liquids in the bowl, to determine the presence of undesirable or dangerous materials in gases.

When the bubbler bowl is filled with liquid a visual indication is given by bubbling. The adjustable needle valve at top controls the rate of bubbling.

This Meriam Sight Feed Bubbler with bowl of Pyrex glass is good for line pressures up to 30 lbs. per sq. in.; of plastic, for pressures up to 100 lbs. Sturdily built for lasting, trouble-free operation.

Available in ring type (illustrated) or strap type—both types providing for removal of bubbler bowl. For complete information on this new Meriam product write for Bulletin 21.

THE MERIAM CO.

1989 WEST 112 STREET

CLEVELAND, OHIO

When inquiring specify CEP6232 — see information request blank, pgs. 2-3

Sly Dust Filter exhausting from metal working machinery in a large machine shop



SLY DUST CONTROL
GETS THE INVISIBLE DUST

Due to the efficiency of their special cloth screens, Sly Dust Filters collect even this extremely fine dust.

Briefly, Sly Filters offer you:

1. Greater filtering capacity because of more filtering cloth
2. Taut bags (patented) save power and improve dust removal
3. Bags more easily replaced
4. Automatic control (any degree) minimizes or entirely removes the human factor
5. Simpler shaker mechanism results in savings in maintenance and operation

Ask for Bulletin 98 and tell us about your dust problem so that we may write you fully.

SLY **THE W. W. SLY MFG. CO.**
4754 TRAIN AVE. CLEVELAND, O.
INDUSTRIAL DUST CONTROL

When inquiring specify CEP6233 — see information request blank, pgs. 2-3

CHEMICAL EQUIPMENT PREVIEW

**LESS
HELP
WANTED**

THE NEW

SPERRY ELECTRIC HYDRAULIC CLOSING DEVICE

Here's increased efficiency plus greater economy. Once this device is installed you can divert labor to other operations—and it can be installed—easily and quickly on your present press.

But that isn't its only economy. Quicker opening and closing speeds up the filtering cycle. Wear and tear on filter cloths is greatly reduced. Operating hazards are minimized. And far less operator effort is required since the operation is controlled by adjustment at only two places.

The new Sperry Electric Hydraulic Closing Device can be applied to your present filter press without extensive alterations, and on Sperry Filter Presses only a substitution of the cross-head is necessary.

Write today for illustrated bulletin.

D. R. SPERRY & COMPANY • BATAVIA, ILLINOIS

Filtration Engineers for over 45 years.

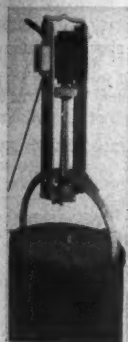
Eastern Sales Representative
Henry E. Jacoby, M. E.
205 E. 42nd St., New York
Telephone: Murray Hill 4-3581

Western Representative
B. M. Pilashy
Merchants Exchange Bldg.
San Francisco, California

When inquiring specify CEP6234 — see information request blank, pgs. 2-3

IF YOU SIFT Anything..

**YOU CAN DO IT BETTER WITH
THE NEW LOWE
ELECTRIC SIFTER**



Sifts liquids, powders or granular materials with equal ease.

Easily equipped for dust-proof sifting. Average power cost — 1c per hour. Can be equipped with any mesh screen. All moving parts protected from dust and dirt.

Totally enclosed ball-bearing motor ensures low maintenance and long life.

Excellent Deliveries on Standard Motors

Get Information and Prices Today

The Federal Foundry Supply Company
4600 E. 71st ST. CLEVELAND, OHIO

When inquiring specify CEP6335 — see information request blank, pgs. 2-3

PRODUCTION

Cleaner For Removing Grease From Cement Floors

Product designed for easy application, quick action and for bleaching and hardening

Uses — For cleaning cement floors. Designed especially to the end of providing an easy, safe, reliable method of removing oil and grease from garage floors.

Features — Removal of grease, one of the chief causes of untimely tire deterioration. Also valuable as a safety measure.

Description — Manufacturer's specifications describe product as non-inflammable, and not possessing acid of toxic qualities which are hazardous to workmen, their clothing and shoes. Also to be so mild chemically that it can be easily handled with no extraordinary precautions. Action and performance attributed to this product in combating grease is that it attacks and emulsifies it upon contact and dissolves it so that it can be flushed away with hose. Time required for completion of this entire sequence is stated to be five minutes or less. Hardening, bleaching and dusting prevention properties are also emphasized. Product is granular material, six ounces, of which, to gallon of water is recommended for the majority of cases. Directed application is to mop on liberally and then permit to set for from three to fifteen minutes. Bleaching and hardening action in proportion to length of time solution is allowed to remain on floor. Brush, mop or squeegee may be used to remove the solution and grime.

TURCO PRODUCTS, INC., Dept. CEP, 6135 So. Central Ave., Los Angeles, Calif.

When inquiring specify CEP6236 — see information request blank, pgs. 2-3

Reflectors for High Bay Areas

For incandescent or high intensity mercury lamps; porcelain enameled surface has a reflectivity of 80%



REFLECTOR . . for high bay areas

Uses — For general lighting of low bay areas in foundries, machine shops, power plants, receiving and shipping rooms and similar industrial locations.

Features — This high bay reflector has a multiple coat porcelain enameled reflecting surface that is permanent and is easily cleaned.

Description — This new line of high bay reflectors is designed for either incandescent or high intensity mercury lamps and is available with either the locklite two piece quick detachable construction or one piece type for conduit or outlet box mounting. The multiple coat porcelain enameled reflecting surface has a reflectivity of 80 percent. Complete information regarding this new equipment will be sent upon request by the manufacturer.

WESTINGHOUSE ELECTRIC & MFG. CO., Dept. CEP, East Pittsburgh, Pa.

When inquiring specify CEP6237 — see information request blank, pgs. 2-3



Now You Can Know...

- That Your Vacuum Lines are Tight
- That They Have Sufficient Capacity
- That Your Pumps are Drawing Properly

Stokes High Vacuum Gauges make it possible, for the first time, to take accurate quantitative readings of high vacuum in rapid succession with a McLeod type instrument. They make it easy to check your vacuum systems at all points, to locate leaks, to determine pressure losses in lines, to compare efficiencies of pumps and process chambers . . . to maintain systems at maximum efficiencies, thus speeding-up production and obtaining desired results in drying, evaporating, impregnating, and other vacuum processing operations.

Stokes Gauges are convenient to use, either as portable instruments or on fixed mountings, in plant or laboratory. They are wide range, easily and quickly read (a few seconds only for a single reading), rugged and durable. They are carefully tested for accuracy of calibration, are widely applicable in all high vacuum processes operating within the micron and 5 mm ranges. Readings are obtainable directly, without the aid of any assisting gauge, reference vacuum, batteries or electrical connections.

Two models, one covering entire range in moderately high vacuum operations and one for very fine readings, down to a fraction of a micron. Fully described in new Bulletin 42-G.

F. J. STOKES MACHINE COMPANY

5974 Tubor Road Olney, P. O. Philadelphia, Pa.

Representatives in New York, Chicago, Cincinnati, St. Louis

Cleveland, Detroit

Pacific Coast Representative: L. H. Butcher Company, Inc.

F.J.Stokes



When inquiring specify CEP6238 — see information request blank, pgs. 2-3

GLOBE MIXERS GIVE YOU

*Faster
Safer
More Thorough*
MIXES Wet or Dry



If you have a chemical or powder mixing problem, you can solve it faster and at less cost with a Globe Tumbling Barrel Mixer. Globe mixers are daily performing hundreds of heretofore costly and hazardous mixing operations economically and safely.

In addition to agitator strips, Globe mixers give you a patented work shifting bottom that generates a sixfold mixing action. Mixing is thorough and rapid. Globe mixers are simple and easy to operate — one unskilled workman can operate several mixers simultaneously.

Globe mixers can be obtained with direct motor drive or a special, remote power application in operations where explosives or inflammables demand extreme caution. Globe mixers can be furnished with wood, steel, or non-ferrous mixing drums. Jacketed barrels for heating are also available.

Write Department 143 for complete information.

The GLOBE MACHINE AND STAMPING CO.
1250 WEST 76th STREET CLEVELAND, OHIO

When inquiring specify CEP6238A — see information request blank, pgs. 2-3

Fluorescent Fixtures for High Bay or Intensity Light for Inspection

Size - 4-100 watt delivers more lumens than a
400 watt H-1 Mercury lamp or 750 watt
incandescent unit

Uses — Fluorescent lighting fixture embodies use of non-metallic reflector in conformation with W-PB order and provides high intensity lighting for industrial inspection areas. Also to produce illumination for high-bay areas.



FLUORESCENT FIXTURE . . . for high intensity or high bay lighting

Features — Construction features include bump-proof ends to protect lamp-holders against abuse and assure correct distance between lamps. Reflector of Masonite Reflector board.

Description — High intensity illumination permits inspector to see minute particles under the diffusing quality of fluorescent lighting. Used for high bay lighting, the 4-100 watt size light of this manufacturer delivers more lumens than does a 400 watt h-1 mercury lamp or a 750 watt incandescent lighting unit. Fixture is available with ballast for 265 volts; also is available for 110-125 and 220-250 volt circuits. In two sizes either for 4-100 watt or 4-40 watt fluorescent lamps.

EDWIN F. GUTH CO., Dept. CEP, 2603 Washington Ave., St. Louis, Mo.

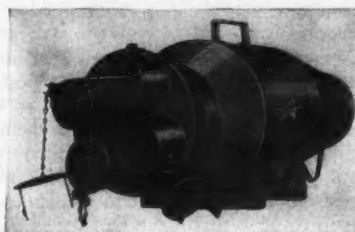
When inquiring specify CEP6238B — see information request blank, pgs. 2-3

Equipment for Production

Portable Exhauster-Blower Reaches Work Areas with Hose Outlets

Weighs only 70 pounds, easily suspended in crowded areas for immediate use

Uses — To provide an extremely compact and portable unit to exhaust gases and fumes from closed-in spaces, crowded working areas and at actual point of work, such as welding.



Features — Weighs 70 lbs. Operates in any position. Can be used as exhauster or blower. Newly designed heavy steel blower wheels.

Description — Adapters for three 4 in. nozzles or four 3 in. nozzles for flexible hose. Caps provided to close nozzles when not in use. Each 4 in. metal hose of 20 ft. length will exhaust 250 cu. ft. air per min. Three in. hose, 200 feet. Powered by 3/4 HP ball bearing motor. This unit is known as the "Octopus Jr".

CHELSEA FAN & BLOWER CO., Dept. CEP, 1206 Grove St., Irvington, N. J.

When inquiring specify CEP6238C — see information request blank, pgs. 2-3

Cutting Tool Load Calculator

Computes HP required for metal cutting operations on various machine tools; operates like slide rule

Uses — Simplifies computing motor horsepower required for metal cutting operations on various machine tools. Accurate for a wide variety of operations on lathes, mills, planers, milling machines. Aids in determining if machines have proper motor capacity and in selection of motors for machines formerly driven from line shafting.

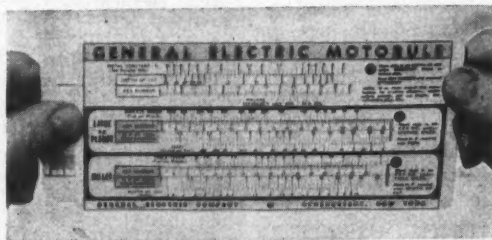
Features — Conserves materials and power supply.

Operation — Constant for the metal to be cut is chosen from table printed on back of rule. By setting scale to the known cutting speed, feed and cut, the cutting power required on the basis of ideal tool and machine conditions is arrived at.

Description — Designed along lines of engineer's slide rule. Available at company office throughout the country. Known as "Motorule."

GENERAL ELECTRIC CO., Dept. CEP, Schenectady, N. Y.

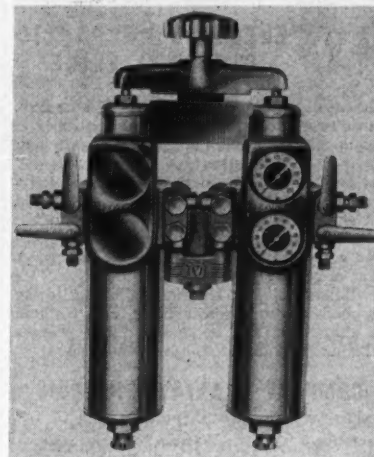
When inquiring specify CEP6238D — see information request blank, pgs. 2-3



RULE-TYPE CALCULATOR GIVES HP NEEDS for cutting operations on machine tools

Compact 100 CFM Air Transformer

Twin-cylinders, single control for two pressure regulators; all metal condensing mechanisms



TWIN CYLINDER AIR TRANSFORMER

Uses — Where large volume of regulated clean air is needed, such as in automatic spray painting and similar pneumatic industrial operations.

Features — Very large capacity. Two pressure regulators function independently but are both positively controlled by single knob. Very compact.

Description — Filtering and condensing mechanisms are permanent, all metal

type — require no replacement of parts. Fast acting regulator diaphragms made of reinforced, oil-proof synthetic rubber. Chatterproof. Connection to main line is made at a single inlet port. Each cylinder may be equipped with automatic water drains. Shipping weight without water drains (which weigh 51 lbs. ea.). 65 lbs. Further information available on request.

DE VILBISS CO., Dept. CEP, Toledo, Ohio.

When inquiring specify CEP6239 — see information request blank, pgs. 2-3

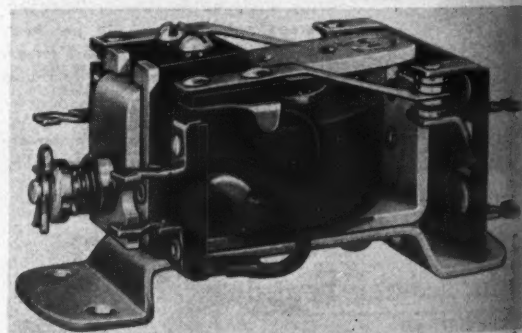
AC-DC Midget Metal Base Relays

Double-pole, double-throw, silver to silver self-cleaning and self-aligning contacts

Uses — These midget metal base relays have been used most frequently in small radio transmitters and are also suitable for various applications where space limitations are an important factor.

Features — Overall height only 1 1/4 inches, from base to armature.

Description — Reduced height and compact features pos-



MIDGET RELAYS VIBRATION RESISTANT . . . up to 10 times gravity in energized position

CHEMICAL EQUIPMENT PREVIEW

"NATIONAL" DRYERS For the Chemical Industry

Designed to insure fast, uniform drying under all conditions, and built to give long, dependable service with important economies in operation and maintenance.



TRUCK TYPE TRAY DRYER

For fast, efficient drying of chemicals in the batch. Dries entire load, uniformly, without dusting. Built to accommodate one or more trucks.



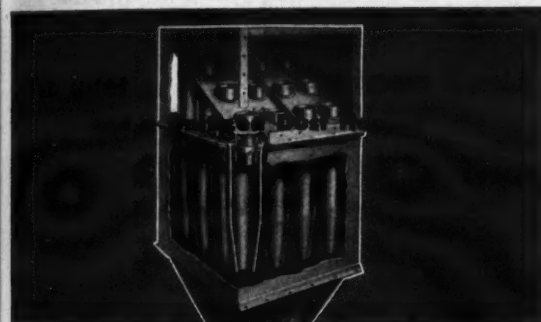
CONVEYOR TYPE DRYER

Continuous hopper feed; uniform distribution of material on conveyor belt; pressure extraction and heating for the pre-drying.

"NATIONAL" builds Chemical Dryers of all types, each designed to meet specific requirements. If you are planning to install new dryers or to modernize existing equipment, "NATIONAL" engineers will gladly submit recommendations. Write, wire or phone.

The National Drying Machinery Co.
2709 N. HANCOCK STREET, PHILADELPHIA, PA.

When inquiring specify CEP6240 — see information request blank, pgs. 2-3



This is how the MULTICLONER simplifies installation and saves space

The patented vane design of MULTICLONER tubes eliminates need for the complicated manifolding and costly multiple ducts of conventional side-entry cyclones. This important advancement permits any number of tubes to be compactly installed in small areas, using only ONE inlet and ONE outlet header. In addition, the particles removed by an entire bank of tubes are collected through one unitized hopper, further simplifying installation and operation over the conventional multiple hopper arrangement.

There are only a few of the many engineered advantages that are yours when you install a MULTICLONER. It will pay you to get the full story before you install any dust recovery equipment! Send for bulletin.

- 12
MULTICLONER
ADVANTAGES**
1. Highly Efficient
 2. No Costly Manifolding
 3. Completely Designed
 4. Low Installation Cost
 5. Readily Assembled
 6. Easily Insulated
 7. Rapidly Constructed
 8. No Moving Parts
 9. Easily Inspected
 10. Low Power Loss
 11. No Fire Hazard
 12. Unitized Dust Hopper



**WESTERN Precipitation
CORPORATION**

Engineers, Designers
and Manufacturers of
Equipment for Collec-
tion of Suspended Ma-
terials from Gases and
Liquids

Main Office: 1017 West Ninth Street • Los Angeles, Calif.
New York: Chrysler Bldg. • Chicago: 140 S. Dearborn St.
San Francisco: Hebert Building

PRECIPITATION COMPANY OF CANADA, LTD. • DOMINION SQUARE BUILDING, MONTREAL

When inquiring specify CEP6241 — see information request blank, pgs. 2-3

PRODUCTION

sible through metal base and short magnetic circuit. High quality phenolic insulation with lacquered edges is used throughout to support all current carrying parts. Front connected, double pole, double throw contacts and solder type terminals are standard construction. Relays are vibration resistant up to 10 times gravity in energized position. The armature and contact assembly are designed to eliminate the possibility of vibration dislodging them from normal position. All metal parts except those carrying current, cadmium plated. Contacts are rated: 4 amperes up to 24 volts AC or DC and 4 amperes AC; 1 ampere DC from 25 to 115 volts. Bulletin 104 available on request.

WARD LEONARD ELECTRIC CO., Dept. CEP, Mt. Vernon, N. Y.

When inquiring specify CEP6242 — see information request blank, pgs. 2-3

Alloy Steel Data Sheet

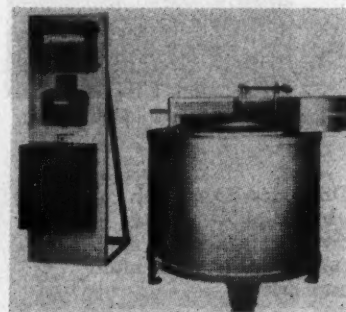
Two-page illustrated bulletin describes in detail features and applications of nineteen different stainless steel, monel and nickel alloys. Comprehensive chart shows analyses, physical characteristics and applications and contains cross-reference of designations and type numbers of Alloy Castings Institute, ASTM, SAE, U. S. Navy and others. Bulletin is standard filing size. Available on request.

COOPER ALLOY FOUNDRY CO., Dept. CEP, 210 Bloy St., Hillside, N. J.

When inquiring specify CEP6243 — see information request blank, pgs. 2-3

Hardening, Tempering Pot Furnace

Throttling type automatic controls; operates at 1650 degrees F.



SALT BATH FURNACE . . . has potentiometer control pyrometer

Uses — For cyanide hardening of tool steel products. Also regular thermal hardening. For production work and general heat treating. Operated at low temperatures for tempering.

Features — Brick and block type heat insulation is used throughout.

Description — Furnace provided with

throttling type automatic controls, including a potentiometer — type control pyrometer with an input regulator. Contractor is also provided for carrying the furnace load. Furnace casing of steel with alloy pot which is suspended from the casing into the furnace chamber by means of a heavy cast intermediate ring. Heating elements are supported in open face grooves in high grade refractory heater plates. Hinged swing type door easy to operate. Terminals are brought out through the casing into an inclosed terminal box located on the back of the housing so that there are no exposed electrical connections at any point on the furnace. Operating temperature is 1650 F. Capacity of unit is 30 k.w. 220 volts, single phase current. Can also be connected on three phase current. Pot dimensions are 16 in. ID and 18 in. deep. Known as "Falcon High Temperature Salt Bath Furnace."

H. O. SWOBODA, INC., 110 13th St., New Brighton, Pa.

When inquiring specify CEP6244 — see information request blank, pgs. 2-3

AMERICAN MONORAIL

for EASY Riding,
JOLT FREE Handling

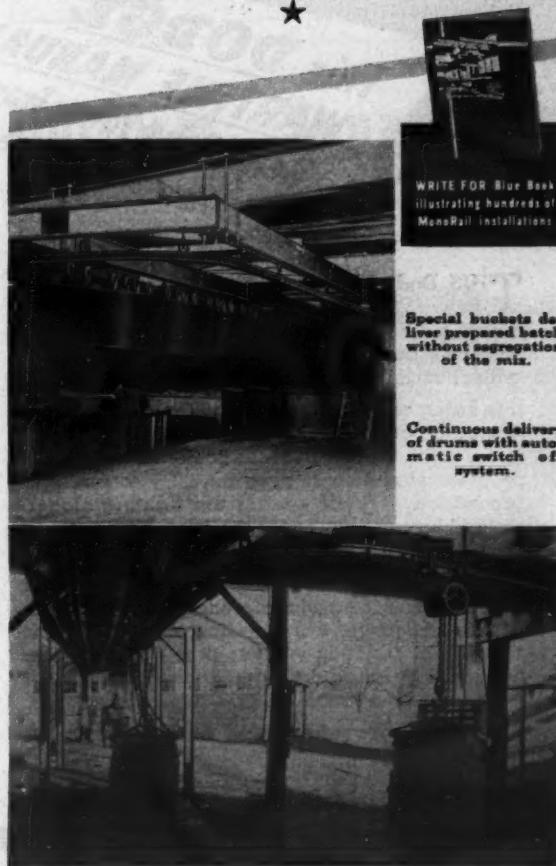
In addition to smooth, quick, efficient and economical handling, American MonoRail Overhead Handling Equipment eliminates floor congestion. It relieves your men from lifting and carrying — enabling them to give full time and skill to production.

Without obligation, an American MonoRail Engineer will gladly show you many other advantages of this equipment. Write today.

THE AMERICAN MONORAIL CO.

13109 Athens Avenue

Cleveland, Ohio



WRITE FOR Blue Book
illustrating hundreds of
MonoRail installations

Special buckets de-
liver prepared batch
without segregation
of the mix.

Continuous delivery
of drums with auto-
matic switch off
system.

When inquiring specify CEP6245 — see information request blank, pgs. 2-3



THIS Dodge Wartime Manual of Mechanical Power Transmission has been compiled to assist in solving wartime power problems — to conserve power, increase production and save critical materials.

It is being released at a time when conservation of motors, power and critical materials is of vital importance. It is the "How Book" of the Dodge program aimed at helping industry to increase production — built around the fighting slogan — "put all your power in the job."

The new Dodge catalog offers alternate power transmission appliances that save critical metals — and help to throw more scrap into the fight. It presents power transmission equipment that steps up production — saves time — modernizes and increases productivity of present equipment — quickly — economically — effectively.

Between the covers of this new catalog, you

will find "The Right Drive for Every Job" — Dodge D-V drives — bearings — pulleys — clutches and other power transmission appliances designed for use on individual, multi-motor and modern group drives.

Modern planned mechanical power transmission is a potent weapon ready now to wage war on power and material waste — to get more battle power out of horsepower.

Write today on your firm letterhead for the Dodge Wartime Manual of Mechanical Power Transmission.

DODGE MANUFACTURING CORPORATION
Mishawaka, Indiana, U. S. A.

THROW ALL YOUR SCRAP
INTO THE FIGHT!

BUY U. S. WAR BONDS
FOR VICTORY

DODGE
MISHAWAKA

THE RIGHT DRIVE FOR EVERY JOB

PUT ALL YOUR POWER IN THE JOB

—When inquiring specify CEP6246 . . . see information request blank, pgs. 2-3—

PRODUCTION

Swinging Grill Protects Doorways

Has heavy steel frame and steel encased cylinder lock



Uses — This new swinging type protective grill provides an efficient, economical means of barricading doorways without obstructing air, light or vision.

Features — Design is suited to practically any type of building or structure.

Description — Grill proper is assembled in a heavy steel frame and equipped with steel encased cylinder lock.

PROTECTIVE GRILL . . . available in any specified size

Grill is permanently installed by massive side hinges. Offers a high degree of barricading strength. The steel links and 5/16 in. steel rounds are assembled to provide an attractive appearance as well as strength. Size of apertures permit admittance of hand and allow adequate entry of light, air and good visibility.

KINNEAR MFG. CO., Dept. CEP, Columbus, Ohio.

When inquiring specify CEP6247 — see information request blank, pgs. 2-3

Compact Pay Roll Computer

Speeds and simplifies time records, has wide range, fits in desk drawer

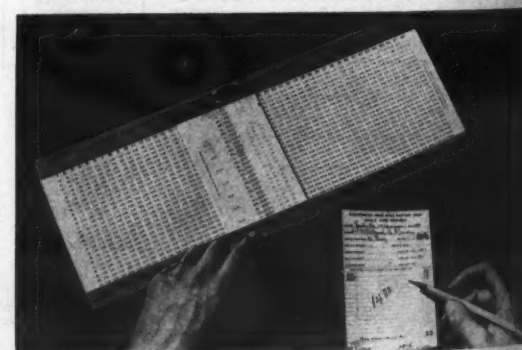
Uses — For quickly computing payroll figures and job costs within a wide range of rates and time limits.

Features — Compact design and simple operation contribute to convenient working conditions and reduces lost motion in making calculations and noting them on time cards and other records.

Description — The range of the device includes all hourly rates of pay from 50c to \$1.75 with a half-cent spread between rates. Covers all time periods up to 104 hours with divisions of one-tenth of an hour. Lacquered wood construction. Fits easily into desk drawer.

BERGER-BRICKER CO., Dept. CEP, 433 So. Spring St., Los Angeles, Cal.

When inquiring specify CEP6248 — see information request blank, pgs. 2-3



PAY ROLL CALCULATOR - WIDE RATE-HOUR RANGE

CHEMICAL EQUIPMENT PREVIEW

ADVERTISERS IN THIS ISSUE

Advertiser	Agency	Page	Advertiser	Agency	Page
Albee Engineering Co.	Spooner & Krieger	58	Kirk & Blum Mfg. Co.	S. C. Baer Co.	38
Albee Steel Co.	Buchen Co.	25	Knight, Maurice A.	Brown Advertising Agency	17
Albion Stone Corp.	Basford Co., G. M.	30	Kold-Hold Mfg. Co.	Jaqua Co.	29
Allen Billmyre Corp.	Michel-Cather, Inc.	41	Lapp Insulator Co.	Ed Wolff & Associates	4th cover
Alma-Chalmers Mfg. Co.	Compton Advertising, Inc.	6	Leeds & Northrup Co.	Jaap-Orr Co.	6
Alvey-Ferguson Co.	Keeler & Sides	6	Lift Trucks, Inc.	Arthur R. Mogge, Inc.	8
American Foundry Equip. Co.	Bayless-Kerr Co.	79	Lincoln Engrg. Co.	Bebel & Walde & Briggs	49
American Monorail Co.	J. Thomas Chirurg Co.	42 & 43	Link-Belt Co.	Bayless-Kerr Co.	49
American Tool & Machine Co.	Will, Inc.	6	Linter Company	Lucerna Company	37
Armstrong Co., V. D.	Russell T. Gray, Inc.	59	Liquidometer Corp.	Advertising Producers	47
Armstrong Machine Works	Alan B. Sanger Agency	26	Logan Engineering Co.	Merrill Symonds	52
Automatic Switch Co.	John H. Riordan Co.	25	Lovejoy Flexible Coupling Co.	Kreicker & Meloon	30
Avery Adhesives Co.			Marsh Corp., Jas. P.	Walter J. Gallagher, Advtg.	52
Bacharach Industrial Instrument Co.	W. S. Hill Co.	31	Mercer Engineering Works	Wayless-Kerr Co.	76
Baker-Perkins Co.	Seemann & Peters	10	Meriam Company	McLain Organization	76
Baker-Pauling Co.	Basford Co., G. M.	37	Milton Roy Pump Co.	Chas. L. Rumrill & Co.	3
Baker-Culman Co.	Cummings, Brand & McPherson	34	Mixing Equipment Co.	Gardner Advertising Agency	19
Bach-Ross Co.	Spooner & Krieger	44	Monasato Chemical Co.	Weston-Barnett	22
Bauer Pipe Tools Co.	Van Auker-Ragland, Inc.	48	Mortell Co., J. W.	Hyatt Eby Advtg.	70
Benjamin Electric Co.	Walter B. Snow & Staff	10	Moto-Mower Company	R. C. Breth, Inc.	72
Bird Machine Co.	Martin Associates	41	Multiplex Concrete Machy. Co.		
Blackmer Pump Co.	Al Paul Lefton, Inc.	50, 57	Murray Co., D. J.		
Black-Knox Co.	Louis M. Cottin, Inc.	34	Nat'l Carbon Co.		
Blackman, Inc.	Industrial Advertisers	38	Nat'l Drying Machy. Co.	Geo. C. Taylor	79
Bower & Co., S. F.	Henry T. Bourne & Associates	9	Nat'l Technical Laboratories	Dozier-Graham-Eastman	27
Brown Finishing Co.	Guenther-Bradford	55	Neville Corp.	Wm. Cohen Advtg.	21
Bureau Mills	Rudolph Krebs, Advtg.	60	Niagara Filter, Inc.	Clayton J. Davis Agency	58
Buchanan Co., E. W.			Nicholson & Co., W. H.	Lynn-Fieldhouse	13
Cambridge Instrument Co.	E. M. Freytag Associates	32	Northern Blower Co.	Carr Liggett, Advtg.	62
Cash Mfg. Co., Philip.	S. C. Baer Co.	24	Northern Engineering Works	Witte & Burden Co.	72
Cash Belt Co.	Buchen Co.	65	Ohmite Mfg. Co.	Henry H. Teplitz	56
Cash Belt Co. (Baldwin-Duckworth)	Buchen Co.	13	Oliver United Filters Inc.	Alan B. Sanger, Advtg.	56, 81
Chicago Eye Shield Co.	Kennedy & Co.	60	Owen Bucket Co.	T. H. Ball & Assoc.	76
Chikama Tool Co.	Dana Jones Co.	14	Palmer Co.		
Clark Tractor Co.	William S. Lawson, Advtg.	41	Parsons Engrg. Corp.	T. N. Thompson Agency	74
Cleveland Worm & Gear Co.	Paul Teas, Inc.	61	Patterson Foundry & Mach. Co.	Walker & Downing	71
Copay Corp.	Stockton, West & Burkhardt	61	Pfaudler Company	Chas. L. Rumrill & Co.	23
Cochrane Corp.	Willard G. Myers Agency	17	Photoswitch, Inc.	Bennett, Walther & Menadier	31
Colonial Insulator Co.	Brown Advertising	20	Pioneer Rubber Co.	Carr Liggett, Advtg.	64
Commercial Shearing & Stamping Co.			Pomona Pump Co.	Dozier-Graham-Eastman	74
Connelly Iron Sponge & Governor Co.	A. B. Wilder, Inc.	33	Powers Regulator Co.	Earle Ludge & Co.	28
Consolidated Pkg'g. Machy. Co.	Everett L. Bowers, Inc.	14	Premier Mill Corp.	Louis M. Cottin, Inc.	53
Cooper Alloy Foundry Co.	Michel-Cather, Inc.	40	Proportioners, Inc.	Alden M. Hammond Advtg.	2
Corning Glass Works	Chas. I. Rumrill & Co.	7	Pulmosan Safety Equipment Co.	Thoma & Gill	70
Corning Glass Works Crane Company	Buchen Co.	35	Pulverizing Machinery Co.	Louis M. Cottin, Inc.	68
Darling Valve & Mfg. Co.	Griswold-Eshleman	24	Read Machinery Co.	J. G. Kuester Associates	4 & 5
Davis Emergency Equipment Co.	Louis M. Cottin, Inc.	56	Reliance Electric & Eng. Co.	C. A. Reece	40
Davis Regulator Co.	Russell T. Gray, Inc.	34	Richmond Mfg. Co.		
Dry Co., J. H.	J. W. Ramsey Co.	63	Ridge Tool Co.	Carr Liggett, Advtg.	75
Dayton-Dowd Co.	Harold C. Walker Co.	24	Robbins & Myers	Erwin, Wasey & Co.	57
DeWitt Hotel	Swafford & Koehl	70	Robbins Conveying Belt Co.		
Diamond Chain & Mfg. Co.	Kirkgasser-Drew	40	Robinson Mfg. Co.	Walter J. Gallagher Advtg.	66
Dieter Co., Harry W.			Rock-Tred Co.	Kennedy & Co.	18
Dodge Mfg. Co.	Klau-Van Pietersom-Dunlap	80	Ross Engrg. Corp.	Alexander Ross Agency	45
Draco Corp.	Grover J. Johnson	52	R-S Products Co.	McLain Organization	66
Duralumallic Corp.	Ogden Advertising	53	St. Regis Paper Co.	Basford Co., G. M.	54
Duram Mfg. Co.	Vernon S. Weiler, Advtg.	21	Sanymetal Products Co.	Lee Donnelly Co.	69
Durs-Tred Co.			Sargent & Co., E. H.	Kreicker & Meloon	27
Eagle-Picher Sales Co.	Needham, Louis & Broby	21	Screw Conveyor Corp.	R. J. Skala Co.	70
Eaton Engineering Co.	Wilson & Haigh	60	Service Caster & Truck Co.	Evans Associates	68
Eclipse Air Brush Co.	Geo. Homer Martin, Advtg.	64	Shriver & Co., T.	Spooner & Krieger	47
Edmont Mfg. Co.	Coleman Todd & Associates	61	Simplicity Engrg. Co.		
Ellis Company	Peterson & Kemper	14	Sly Mfg. Co., W. W.	Bayless-Kerr Co.	76
Emil Engineering Co.	Paul Teas, Inc.	10	South Bend Lathe Works	Lampert, Fox & Co.	49
Exact Weight Scale Co.	J. W. Sieverling	57	Sowers Mfg. Co.	H. A. Hooker Agency	49
Fairbanks, Morse & Co.	Henri, Hurst & McDonald, Inc.	15	Sparkler Mfg. Co.	A. B. Wilder, Inc.	77
Faval Corp.	Paul Teas, Inc.	73	Sperry Co., D. R.	Larcom Randall Agency	51
Federal Foundry Supply Co.	Alan B. Sanger, Advtg.	50	Spray Engineering Co.	Spencer W. Curtis	60
Filter Media Corp.	David M. Gold, Advtg.	54	Spraying Systems Co.		
Fist Machinery Corp.	Harry P. Bridge Co.	82	Sprout, Waldron & Co.	Reincke, Ellis, Younggreen & Finn	32
Fierrock Company	Alan B. Sanger, Advtg.	28	Square D Company	E. D. Wolaver Agency	52
Foster Engineering Co.	Harry Adkinson, Inc.	64	Sea-Warm Electric Co.	Searns Magnetic Mfg. Co.	82
Fountain Square Hotel			Stebbins Engineering Co.	Franklin Industrial Service	18
Gar Mfg. Co.	Van Auker-Ragland, Inc.	71	Stebbins-Adams Mfg. Co.	Evans Associates	53
Gates Rubber Co.	Woolley & Hunter	67	Stokes Machine Co., F. J.	McLain Organization	77
General Electric Apparatus Div.	Basford Co., G. M.	29, 36, 50, 56	Surface Combustion Corp.	Griswold-Eshleman	48
General Electric Lamp Div.	Batten, Barton, Durstine & Osborn	39	Swenson Evaporator Co.	Fensholt Co.	61
General Electric Motor Div.	Basford Co., G. M.	65	Syntron Company		
Globe Machine & Mfg. Co.	H. D. Myers Adv. Agency	78	Taber Instrument Corp.	Horace Laney, Advtg.	31
Goodall Rubber Co.	Geo. C. Taylor	73	Taber Pump Co.	Tyler Kay Co., Inc.	10
Green Mfg. Co.	Moore & Associates	14	Tennet Engineering Co.	Gotham Advertising Co.	82
Hardings Company			Toledo Scale Co.	Beeson-Faller-Reichert, Inc.	65
Hamp Co., H. M.	Commercial Advtg. Agency	29	Townmotor Company	Howard Swink Agency	82
H-B Instrument Co.	W. N. Hudson, Advtg.	33	Tri-Clover Package Machy. Co.	Russell T. Gray, Inc.	38
Hunt Machine Co., Rodney	Channing L. Bete Co.	58	Tri-Clover Machine Co.	Arthur Meyerhoff & Co.	39
Huppert, K. H.	Campbell & Reynolds	56	Trimount Instruments Co.	Russell T. Gray, Inc.	30
Illinois Electric Porcelain Co.			Turco Products Co.	Easig Company	20
Ingersoll-Rand Co.			Union Special Machine Co.	Russell T. Gray, Inc.	73
Ingersoll Steel & Disc	Rogers & Smith	44	Universal Road Machinery Co.		
International Engineering Co.	Parker Advertising Co.	46	U. S. Stoneware Co.	Ralph Grom Advtg.	83
Jackson & Church Co.	Seemann & Peters	33	Wakefield Brass Co., F. W.	Foster & Davies	68
Jones Mfg. Co., D. O.	Paul C. Bowman	51	Weatherhead Co.	Meermans, Inc.	72
Jolley Mfg. Co.			West Bend Equipment Co.	Morrison Advertising Agency	46
Knapp Steel Co.	Sykes Advertising Agency	70	Western Felt Works	Evans Associates	51
Knapp Corp.	Kreicker & Meloon	44, 64	Western Precipitation Co.	Dozier-Graham-Eastman	79
Kump Co., C. M.	Frank D. Webb Co.	58	Weston Elec'l Instrument Co.	Basford Co., G. M.	32
Keweenaw Mfg. Co.	Rogers & Smith	35	Wheelock Instruments Co.	Merchandising Advertisers	28
Kinney Mfg. Co.	Alden M. Hammond Advtg.	59	Whitney Chain & Mfg. Co.	Sutherland-Abbott	48

SLURRY PUMPING AT ITS BEST

... It's by means of the O-D-S Pump, the slurry pump operating without mechanical connections to the diaphragm.



IT'S a durable pump, this O-D-S Slurry Pump. Already in service on many different kinds of slurry, hot as well as cold, it is proving that the absence of mechanical linkage is a definite cost-reducing factor. Maintenance is low. Its efficiency is due in part to the fact that full pressure is exerted over the whole diaphragm.

Write for Bulletin 307-R which gives the full details.

OLIVER UNITED FILTERS INC.

New York Chicago San Francisco
Dept. 005 Western Sales: Oakland, Calif.

When inquiring specify CEP8249 — see information request blank, pgs. 2-3

Uniform Separation

The new model GAYCO Centrifugal air separator makes possible the uniform and increased recovery of cement and other extremely fine materials within a range of 80 to 400 mesh.

- Greater Capacity
- Cleaner Trailings
- 99% Through 325 Mesh



- 25% to 30% greater recovery of fines.
- Not affected by variation in speed or rate of feed.

Manufacturers also of "Reliance" Crushers, Screen, Elevators, Conveyors, Bin Gates, Grizzlies. Complete crushing, screening and washing plants for crushed stone, sand and gravel.

Universal Road Machinery Co.

RUBERT M. GAY DIVISION 117 Liberty St. New York, N. Y.

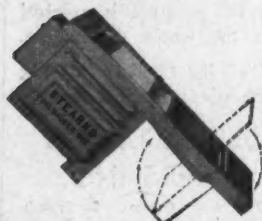
Canadian Representative: F. H. Hopkins & Co., Ltd., Montreal

FACTORY & LABORATORY, KINGSTON, N. Y.

When inquiring specify CEP8250 — see information request blank, pgs. 2-3



Protection Against TRAMP IRON with *Stearns* MAGNETIC SEPARATORS



Stearns Spout Magnets are designed in sizes to suit your capacities.

When inquiring specify CEP6251 — see information request blank, pgs. 2-3

Tramp iron was damaging grinders used to prepare scrap acetate for re-use by an Eastern plastics manufacturer. Stearns Spout Magnets were recommended — result, tramp caught efficiently, economically, automatically. Tramp iron is a prevalent menace to smooth, profitable production. The judicious use of Stearns Magnetic equipment is your best insurance against expensive repairs to machinery . . . costly shut-downs . . . hazardous fires and explosions . . . possible loss of lives . . . law suits and such headaches.

If you have a tramp iron problem consult Stearns Magnetic at Milwaukee. Write for Spout Magnet data. Bulletin 92 — Giant Spout Magnets, Bulletin 97 — Dust-tight Spout Magnets, Bulletin 93 — Magnetic Pulleys, Bulletin 302 — Suspended Magnets, Bulletin 25. No obligation.

STEARNS MAGNETIC MFG. CO.

642 S. 28th St., Milwaukee, Wis.



PATCH FLOORS

While Traffic Rolls

Roll a drum of INSTANT-USE over to the hole in the floor — remove the lid — shovel out enough to fill the hole — tamp smooth — and open the spot to regular traffic immediately, without waiting. You'll have a tough, solid, permanent patch that formerly took 24 hours to get. This rugged, new plastic bonds tight to old concrete, withstands extreme loads. Keep a drum on hand. Immediate shipment.



REQUEST DESCRIPTIVE FOLDER
And Details of FREE TRIAL OFFER



INSTANT-USE

FLEXROCK CO., 2311 Manning St., Phila., Pa.

When inquiring specify CEP6252 — see information request blank, pgs. 2-3

PRODUCT DIRECTORY

(Continued from page 3)

Product	Page	Product	Page
Filter Press	47, 57	Pipe, Synthetic	22, 51
Filter Press, Hydraulic		Pipe Tools	46, 75
Closing Device for	77	Plastic, Structural Resin	18
Filters	10, 38, 58, 66, 68	Plastic, Transparent	21
Filters, Horizontal Plate	49	Plastics	21
First Aid Films	53	Plating Unit, Portable	74
Fittings	72	Porcelain, Chemical	
Floor Resurfacer			11, 20, 36, 4th Cover
	4, 11, 18, 21, 82	Press, Dewatering	33
Flooring, Asphalt	20	Press, Hydraulic	74
Flooring, Conductive	4	Priority Handbook	40
Furnace, Book — Blast	39	Processing Equipment	
Furnace, Laboratory	56		4, 5, 13, 34, 50, 54, 66, 71
Furnace, Salt Bath	79	Proportioners, Chemical	2, 16
G		Pulverizers	68
Gauge, Recalibrator	30	Pump Data Sheets	44
Gauges, Liquid Level	30	Pumps	10, 11, 12, 36, 42,
Gauges, Tank	32		57, 59, 63, 67, 69, 74, 81
Gauges, Vacuum	14, 29, 77	Pumps, Centrifugal	6, 37
Gears	51	Pumps, Latex	76
Generator, All-Purpose	31	Pumps, Proportioning	2
Glass Block Partitions	73	Pumps, Rotary	29, 36, 41
Glassware, Laboratory	39	Pumps, Steam Jacketed	56
Glazes, Ceramic	13	Pumps, Vacuum	44
Gloves, Neoprene	64	Pumps, Viscous	38
Gloves, Rubberized Work	61	Pyrometers	27, 32
Graphite, Colloidal	13, 44	R	
Graphite, Handbook	46	Recorder	6
Grating, Steel	57	Recorder, Two-Pen Flow	31
Grill, Swinging Door	80	Recorder, Time	31
Grinders, Portable	39	Reducers, Speed	61
Grinding Wheel Compound	53	Reflectors, Lighting	77
Gum Solution, Dissolving	15	Refrigeration Cabinets	26
H		Relays, Midjet	79
Hairguard	68	Resins, Coumarone-Indene	21
Handling Equipment		Respirators	24, 60, 66, 70
	38, 46, 52, 79	Rheostats	56
Hangers, Fluorescent	58	Rolls	45
Heat Units, Electric	69	Rosin, Hydrogenated	45
Heater, Cast Iron Grid	72	Rubber, Care of Industrial	46
Heater, Compound	52	Rubber Guide Book	37
Heater, Instant Water	44	S	
Heaters, Air	45	Salts, Heat Treating	37
Hoists	71	Sapphires, Synthetic	49
Hotels	64, 70	Scales	37, 40, 63
Host, Steam	43	Scrapers	13
Humidifiers	8, 36, 51, 59	Screens, Vibrating	37, 45, 55, 59
I		Separators, Centrifugal Air	81
Insulation	21, 22	Separators, Magnetic	82
J		Shape Book	17
Joint, Rotary Pressure	64	Shellac, Synthetic	16
Joints, Ball Bearing	70	Shield, Plastic Face-Eye	23, 60
Joints, Swing	14	Sifters	48, 58, 77
K		Signs, Luminous	53
Kettles	13, 14, 23, 49	Solenoids, Laminated	4
Kiln, Rotary	61	Spotlight, Emergency	35
Koroseal, Handbook	21	Spray, Roof Cooling	10
L		Starters	16, 32, 36
Labels	25, 65	Steel, Sheet & Plate	38
Laboratory Equipment	30, 35	Steel, Stainless-Clad	44, 71
Lathes	15, 47	Steels, Standard	41
Lathes, Cleaning Methods	46	Stitcher, Carton	25
Lead Coating	36	Stoneware, Chemical	83
Lighting Equipment		Surface Temperature Tester	33
	25, 39, 48, 68, 77, 78	Surfacing, Belt	42
Lights, Signal	47	Sweeper, Motorized	70
Lining, Concrete Form	17	Sweeping Compound	24
Lining, Synthetic Rubber	73	Switch, Program	34
Linings, Acid Proof Tank	18, 63	Switches, Heavy Ampere	12
Lockers, Wood	5	Switchboards	41
Lubricant, Conveyor Chain	9	T	
Lubricant, Dry Drawing	18	Testing Apparatus	27
Lubrication, Bearing	45	Textile Finish, Petroleum	21
Lubrication, Centralized	49, 73	Thermocouple Materials	26
Lung, Rubber	71	Thermometers	28, 31, 32, 33
M		Thermometers, Indicating	28
Manometer, Heavy-Duty	33	Thermometers, Remote Bulb	32
Metallizing Equipment	45	Timers, Multi-Contact	28
Metastable, Anhydrous	18	Toilet Compartments, Wood	
Sodium	48, 69	Transformer, H. D. Air	78
Meter, Ground Resistance	33	Transmission, Power	80
Mills, Ball & Pebble	46	Traps, Steam	6, 13, 46
Mills, Colloid	53	Trucks, Industrial	10, 37, 41
Mixers	10	Trucks, Lift	8, 82
Mixers	3, 4, 5, 45, 49, 60, 72, 78	Tubes, Chart on Electronic	30
Mixers, Tumbling Barrel	78	Tubing & Fittings, Plastic	36
Moisture Tester	34	Tubing, Heat Transfer	9
Motor Selection	45, 63	V	
Motors, Air	60, 71	Valves	16, 24, 26, 28, 33, 39, 43, 66
Motors, Electric	15, 37	V-Belt Drive Conservation	40
Multicloner	79	V-Belts	67
N		Ventilator, Blackout	49
Nozzles, Spray	60, 65	Ventilator-Exhauster	78
O		Vibrating Equipment	61
Oven & Dryers	45	Viscosity Bath	27
P		W	
Packer, Auger	38	Water Detector Lock, Elec-	
Packing, Metallic Pump	53	tronic	26
Paint, Dehydrated	20	Water Treatment Equip.	36
Pattern Repair Fabric	14	Weathering Unit	27
pH Control	27	Wheels, Infra-Red Drying &	
Pipe-Joint Compound	20, 67	Polishing	71
Pipe, Acid-Proof	17	Wheels, Portable Tool	41
Pipe, Pyrex Glass	7		



An Authoritative Booklet

... illustrating and describing the latest developments in testing and control equipment for all conditions of temperature, humidity and vacuum.

HIGH ALTITUDE CHAMBERS
CONSTANT AND VARIABLE TEMPERATURE BATHS
HUMIDITY CHAMBERS. ALL-WEATHER ROOMS

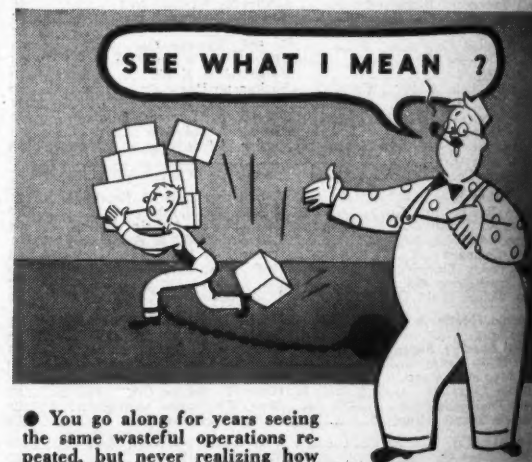


Engineering specifications for more than eighty installations are shown in the Booklet that will be mailed to you on request. Please address Dept. C-1.

TENNEY ENGINEERING, INC.

8 Elm Street Montclair, N. J.

When inquiring specify CEP6253 — see information request blank, pgs. 2-3



● You go along for years seeing the same wasteful operations repeated, but never realizing how much they handicap men and machines. Then sock! . . . something opens your eyes and inefficient materials movement stands out like a sore thumb. You see countless opportunities.

What opened my eyes? That new Towmotor manual, "The Inside Story." Man alive, that's the most comprehensive lift-truck study ever published. Shows you what makes 'em tick . . . where, how and why you can use 'em. It's full of ideas for all management, traffic and production men.

But why not find out for yourself? You can get a free copy simply by writing . . .

TOWMOTOR COMPANY

1218 East 152nd Street
CLEVELAND, OHIO



When inquiring specify CEP6254 — see information request blank, pgs. 2-3





v

M
in
So
it
w

T
ul
it
th
pe
to

T
an
po
gr
ne
fe

A
Ch
gr
do
cel

It
of
die
Tw
en

\$7
ing
to
sup
an

Ex
em
wh
exp
up
wa
spe
"ra
she
...
Les
for

T
App
and
ing
can
wor
The
spec
cans
com
tion
mov
dest
com
hom
wash
and
ous
is c
of t
the
tons
and
tons
steel

F
u
b

"That's Interesting"

Moths cause many circuit switching failures by their liking for felt washers used in power line equipment. So extensive has been this damage that it has been necessary to treat the felt with insecticide.

The term "in cahoots" was a popular expression in the old West. Yet, it really comes from old England where the word cahoot was used to indicate partnership or two or more who acted together.

The reconditioning of typewriter and printing machine rollers is an important conservation measure now. A grinding method that restores roundness and lengthens life has been perfected by Studebaker Corp.

A score of cities have subways, Chicago being the latest addition to a group that includes New York, London, Paris, Moscow, Liverpool and Barcelona.

It takes about seventy-five pounds of cotton to equip and maintain a soldier for one year on non-combat duty. Two to three times that much when engaged in actual warfare.

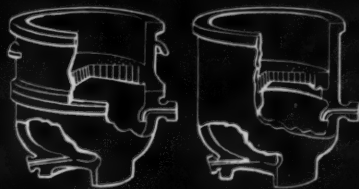
\$7,500,000 per day is the staggering cost of occupation to France enough to build homes for 2,500 workmen and support five hundred French families for an entire year.

Explosives truck rides rails. Government arsenals are using an unusual wheel assembly on trucks transporting explosives, enabling these trucks to run up to 60 miles per hour on either highway or railroad track. In addition to special non-skid tread tires, flanged "railroad type" wheels are mounted ahead of front rubber tired wheels, enabling the truck to "ride the rails." Lessened jar and jolt is claimed to make for safer handling of explosives.

"Tin Cans" yield tin and steel. Approximately 24 pounds of tin oxide and almost a ton of scrap steel is being recovered from each ton of old tin cans by new methods which have been worked out in test plant of Metal & Thermit Corp. in San Francisco. No special preparation of the discarded cans is necessary. The processing unit comprises unloading equipment, inspection station, rotary screens for dirt removal, incinerator for charring cans to destroy fat, paper, lacquer and other combustibles and to separate the carbonaceous residue, shredding and pre-washing equipment, storage facilities and complete equipment for continuous detinning by the alkali method. It is estimated that about 2,500,000 tons of tin cans are discarded annually in the U. S. . . . of which about 1,000,000 tons could be economically collected and detinned, yielding about 11,000 tons of tin and 900,000 tons of scrap steel.

For more information on Products at right, specify CEP 6255 . . . see information request blank between pages 2-3.

HERE ARE IMPORTANT ITEMS OF PROCESS EQUIPMENT MADE FROM NON-CRITICAL MATERIALS AND AVAILABLE FOR QUICK SHIPMENT*



SUCTION FILTERS

Five to fifty gallon capacity. Resistant to all corrosives except hydrofluoric. Strong, durable, easily cleaned. Will withstand a complete vacuum. *Bulletin 104.*

ACID-BRICK AND CEMENT

With U.S. Stoneware's "USSCO" Acid-Brick and U.S. Stoneware's wide range of acid-proof cements, suitable combinations can be found to resist almost all corrosives. For tanks, towers, floors, etc. *Bulletin 801-C.*

ACID-PUMPS

Centrifugal Acid Pumps, lined with "Ceratherm," heat-shock resistant ceramic body. Handles all acids except hydrofluoric. Iron armored exterior, painted with Tygon. *Bulletin 703.*



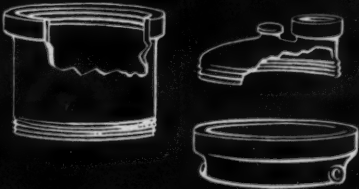
TANKS — POTS — JARS

Round or rectangular tanks in capacities up to 600 gallons. Acid-and-corrosion-proof all the way through. Wide range of stock sizes and shapes. *Bulletin 405.*



ACID TOWERS

Complete line of Tower Sections, including Saucers, Intermediate Sections, Tower Covers, Distributors. Stock sizes 18" to 60" I.D. Very large towers in acid-proof masonry designs. *Bulletin 54.*



TOWER PACKING

More "U.S." Tower Packing is used than all other tower packings put together. In white porcelain or chemical stoneware. Fifteen different standard styles. *Bulletin 54.*



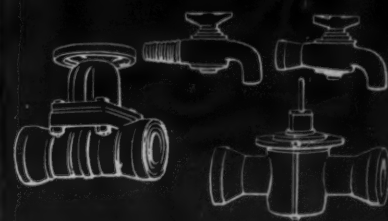
ACID-PROOF PIPE & FITTINGS

Chemical stoneware pipe — acid-proof all the way through. True to dimension, extra strong, non-porous, easily flushed clean. Standard sizes 1" to 36" I.D. *Bulletin 551.*



VALVES — FAUCETS

Acid-proof chemical stoneware. Complete line. Wide range of sizes and styles in stock. Line includes Hills-McCanna and Lubricated Valves. *Catalog Pages 80-82.*



* ALL STOCK ITEMS OFFERED SUBJECT TO PRIOR SALE

U.S. Stoneware designs, builds and erects corrosion-resistant equipment from all available materials: natural rubber, synthetics, the metals and their alloys, and the wide range of industrial ceramics. During this period of rigid allocation of materials our knowledge of corrosives and methods of their control may prove of incalculable value to engineers. Please feel free to write without obligation.

U. S. STONEWARE

AKRON, OHIO

In Canada: Chamberlain Engineering, Ltd., Montreal

ENGINEERS, MANUFACTURERS, ERECTORS OF CORROSION RESISTANT EQUIPMENT

FASTER CONSTRUCTION

STEADIER OUTPUT

HIGHER PURITY

Lapp Chemical Porcelain



PROPERTIES OF LAPP PORCELAIN AS A MATERIAL OF CONSTRUCTION

Lapp Porcelain is a dense, homogenous, thoroughly-vitrified, non-porous ceramic. It is completely iron-free, and by nature of its chemical composition is unaffected by any acids except hydrofluoric, is resistant to alkalis. In this characteristic, its smooth texture and complete non-porosity further contribute, in that corrosive liquids are prohibited from absorption and capillary action. Its high order of mechanical strength is surprising to those who have considered porcelain as a fragile material. Its dense homogenous body, and the fact that most pieces are built substantial in section, make Lapp Porcelain a material of ruggedness sufficient to withstand the use and abuse of normal industrial practice.

Lapp Raschig Rings



"Lowest cost per year of any tower packing ever used," say many engineers who have now adopted Lapp rings as standard. High mechanical strength and non-porous resistance to corrosion mean longer packing life without crumbling, more hours of uninterrupted service. Purity as found only in chemical porcelain, of course. Sizes to 3", some available from stock.

Lapp Porcelain Pipe

Uniform section pipe with cemented flanges offers high mechanical and thermal strength. Accurately ground pipe ends permit installation with very thin hard gaskets, thus eliminating a chief source of trouble in corrosion-free piping. For special applications where no gasket material can be tolerated, it is entirely practical to use the pipe without gaskets. All standard sizes up to 8" inside diameter, lengths as ordered to 60". All standard fittings.

Special Porcelain Pieces

Lapp facilities lend themselves to the production with relative ease of a variety of special shapes. Routine with us are many types of boiling kettles, processing jars, strainer plates, vacuum filters, towers. If there's a chance that porcelain is the answer to a problem of yours, we'd like to look over your blueprints.

The Valve

No corrosion-free equipment has ever been put to such severe test as the Lapp Valve. None has ever met requirements more satisfactorily. Valve stem is ground and polished to mirror finish, sealing surfaces lapped to precision fit—action is smooth and easy, without abrasion of packing. Seal is maintained, even under thermal change and vibration, by a unique spring washer arrangement. Liquids come in contact with porcelain only. Standard sizes to 4".

To priority-plagued processors trying to meet into-production-in-a-hurry schedules, Lapp Chemical Porcelain offers a welcome non-scarce material of construction. To processes involving corrosive solutions or vapors for knocking the rusting out of pipes, valves and other equipment, this remarkable material brings increasing strength and endurance. To processes critical as to contamination, it makes possible the highest purity heretofore associated only with laborious and costly chemical porcelain.



*Not Critical...
Quickly Available*

The raw materials of porcelain are available in unlimited quantities. Lapp facilities are equipped for the production of a large volume of porcelain, and of grinding, polishing, cementing and assembly operations. For pipe, flanges, valve hardware and other metal parts, reasonable priority orders are sufficient. On order, plans of simultaneous with those for other major equipment, delivery schedules will keep pace of any construction program.

Descriptive literature and data on request,
Lapp Insulator Co., Inc., Chemical
Porcelain Division, 1110, New York.

Lapp

Chemical Porcelain

Valves • Pipe • Raschig Ring